

CALIFORNIA JOURNAL OF ELEMENTARY EDUCATION

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CALIFORNIA JOURNAL OF ELEMENTARY EDUCATION

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EDITORIAL COMMENT AND NEWS NOTES

A NEW DEGREE OFFERED BY THE STATE COLLEGES

The State Board of Education on January 7, 1937, adopted a resolution which lays the basis for providing new educational opportunities for a large portion of the teachers of the state. The resolution empowers each of the seven state colleges to award the Bachelor of Education degree. This degree will be based upon an evaluation of successful experience and educational activities as a substitute for certain academic courses. The purpose of the regulation is to provide an opportunity for the upgrading of those teachers now in service and who do not meet standards of training at present required for entry into the profession.

Teachers who take advantage of the opportunity provided by this regulation will not only be eligible to secure certain credit for non-academic work but they will in addition be able to secure a baccalaureate degree without meeting the traditional technical academic requirements involving the academic majors and minors and other detailed prescriptions required for the Bachelor of Arts degree. Candidates for the new degree will pursue programs of studies designed to be of greatest value to the teachers themselves in their classrooms and in their communities. The degree is professional in character and is not intended to qualify holders for graduate standing in the universities, nor does it carry with it a credential.

All graduates of two-year, two-and-one-half-year, or three-year curricula of the California state colleges when these institutions were normal schools or teachers colleges and who have five or more years of successful teaching experience, and all holders of California life diplomas or those who have taught five or more years in California public schools, are eligible for candidacy for this degree.

The degree will be granted upon the successful completion of 124 semester hours of college or university work or the equivalent. Of the total requirement, at least 106 semester hours of credit shall be earned in regular campus classes, extension classes, or in correspondence courses under college or university direction. A maximum of eighteen hours of credit may be allowed for experiences that can be evaluated as equivalent to regular academic work. Equivalent experiences

shall be evaluated in terms of professional service units, and each such unit shall be counted as equivalent to a semester hour of credit. Graduates of the former three-year curricula of the state colleges are advised to continue their work toward the Bachelor of Arts degree. But in case such graduates elect to take the Bachelor of Education degree the requirements may be satisfied by completing at least eighteen semester hours of college work in addition to equivalent credit that may be allowed for other experiences or activities.

Professional service units shall be allowed for professional activities involving teaching experience, travel study, published writings, specific contributions to the extracurricular and extraclass professional life of the community, participation in activities of professional organizations, leadership in community recreational life, active participation in the administrative activities of the school system, such as committee work of all kinds, and experimental classroom work utilizing new methods and procedures. A maximum of eighteen professional service units may be allowed for experiences of this type and not to exceed six units may be allowed for any one kind of activity.

The residence requirement for the degree can be met by completing a minimum of twenty-four semester hours of work in the state colleges. One-half of this requirement can be satisfied by work completed subsequent to June 1, 1934, in the college granting the degree.

The operation of the State Board regulation governing the granting of the Bachelor of Education degree shall not extend beyond February 1, 1947, and all applications for this degree must be filed and at least six semester hours of work completed before February 1, 1942.

A majority of the teachers of the elementary schools of the state do not at present hold a baccalaureate degree. Many of these teachers have continued to improve their professional competency by engaging in educational experiences and activities. The action of the State Board of Education now provides an opportunity for these teachers to use these experiences and activities in part at least as a basis for securing a professional degree. Its attainment will carry with it both personal satisfaction and professional recognition. To the extent that the teachers of the state avail themselves of the opportunity offered under the new regulation, a further and continued improvement will also follow in the quality of instruction provided for the children in the great school system of the state.

Teachers who wish to become applicants for the degree should write directly to one of the California state colleges at Chico, Fresno, Arcata, San Diego, San Francisco, San Jose, or Santa Barbara.

CHARACTERISTICS OF GOOD TEACHING

A group of teachers, principals, and supervisors in the Oakland public schools during the past two years has been working on the problem of what constitutes the characteristics of good teaching. The conclusions of this committee were recently published in leaflet form by the Oakland public schools. The statement is in no way a final one but indicates the result of the thinking of the group to the present time. Because of the state wide interest in the subject the statement on good teaching on the elementary school level is published here through the courtesy of Superintendent E. W. Jacobsen.

CHARACTERISTICS OF GOOD TEACHING ELEMENTARY SCHOOL

The educational thinking which is to affect the learning of children must ultimately find its expression in something done by pupil and teacher. An attempt has been made here to described good teaching in terms of practices which characterize it. The characteristics of good teaching outlined in each of the ten major criteria which follow are not thought of as being complete descriptions but are offered for the purpose of making clear what is meant by the major criteria. It is suggested that each of us use these criteria for the purpose of improving teaching practices.—E. W. JACOBSEN.

1. *Pupils evidence habits of behavior appropriate to the needs of each situation.*
 - a. Children courteously listen when someone speaks to the group.
 - b. Children await their turn without interrupting.
 - c. Children enter the classroom and move about therein in a free but controlled manner.
 - d. Children talk and plan their work together while working in a group.
 - e. During physical education periods children call out freely and joyously to one another.
 - f. Pupils leave the room with silence and dispatch when the fire-alarm sounds.
2. *Classroom procedure gives evidence of careful planning and evaluation.*
Planning.
 - a. Materials are in readiness.
 - b. Explanations are clear and to the point.
 - c. Searching questions reveal pupil needs.
3. *Class activities are appropriate to the child's age and maturity level.*
 - a. Observations made during excursions form basis for group discussions.
 - b. Reading and language lessons are developed from common experiences of the group.
 - c. Articles which children bring to the schoolroom form basis for discussion, study and investigation.
 - d. Excursions are taken to places of interest.
- d. Illustrative or supplementary teaching devices are appropriately selected.
- e. Pupils are given precise directions.

- e. Pupils give expression through various art media to ideas gained by observations and discussions.
- f. Children's hobbies and interests are exhibited and discussed.

4. *Effective study habits are being developed and practiced.*

- a. Teachers make certain that pupils clearly know the problem.
- b. Teacher helps pupil to organize and work out a plan of procedure.
- c. Pupils go to work without wasting time and effort.
- d. Pupils keep at their problems until solved.
- e. Pupils work in groups in a concentrated and eager manner.
- f. Children keep records of their own progress.
- g. Children freely consult dictionary, reference materials and pupil-teacher for help.
- h. Teacher assists in helping pupils improve their study procedure.
- i. Library books or unfinished work are at hand so that children that finish may use their time profitably.
- j. Pupils consult enrichment material provided for those completing minimum assignments and quickly choose suitable follow-up work, and continue studying.
- k. Pupils assist in planning and evaluating work.

5. *Instruction is adapted to individual differences.*

- a. Children are grouped according to their ability.
- b. Teacher provides a minimum assignment for the children who have difficulty.
- c. Teacher provides an enriched program for the children who finish their work quickly and accurately.
- d. Each child progresses at his own rate of learning.
- e. Practice work is provided for pupils who need it.
- f. Timid pupils are encouraged.

- g. Each child has a part in the outcome or some part of an activity that he can point to as his own.

6. *Definite provision is made for growth in appreciations.*

- a. Children are made aware of beautiful things in their surroundings by excursions and discussions.
- b. Teacher regularly reads good poetry and prose for children to enjoy.
- c. Pupils assist in planning and carrying out a beauty corner in the room.
- d. Imaginative play is encouraged and brought into classroom activities.
- e. Music, beautiful in tone and rhythm, is played to which children are urged to listen and respond.
- f. Children from fifth and sixth grades listen attentively to Standard School Broadcast.
- g. Children's drawings are carefully selected, mounted and hung where children may see, enjoy and talk about them.
- h. Attention is directed to worth while character traits shown by pupils; such as, kindness, unselfishness, thoughtfulness, courtesy, etc.

7. *Opportunities are provided for growth through self-expression.*

- a. Children have an opportunity to take part in a school assembly.
- b. A period is provided when no assignment is made, during which time a child may paint, write stories or poetry, or read.
- c. Children take part in dramatization of simple, appealing stories.
- d. Announcements are made by children in assembly and to other classes.
- e. Committees of children are appointed to care for grounds, the building, or to help the little folks on the yard.

- f. Children act or play what they think the music says after a listening lesson.
- g. Provision is made for children's special interest in art, music, literature, dramatics, by formation of special groups in these subjects.
- h. Construction activities are stimulated by having in the school environment materials for manipulation.
- i. Pupils are encouraged to respond rhythmically to music.
- 8. *Children participate in keeping classroom attractive and in caring for materials.*
 - a. Pupils distribute and collect supplies replacing them in their particular places.
 - b. Pupils assist in the provision and arrangement of flowers.
 - c. Pupils keep their desks and floor free from litter of any description.
 - d. Charts, illustrations and pictures are hung carefully and artistically.
 - e. Blackboards are kept clean and free from disfigurement.
 - f. Pinning space or an easel is used for the display of pictures.
 - g. Teacher's desk is orderly and clear of cluttering books and papers.
- 9. *Consideration for physical health is evidenced by both teacher and pupils.*
 - a. Teacher and children attend to and regulate room temperature, ventilation and lighting.
 - b. Pupils are excused from regular school work if fatigued, or in need of rest or relaxation.
- 10. *Provisions for mental health and emotional happiness show a definite understanding of child nature.*
 - c. Consideration of proper seating is given to children with defective hearing or vision.
 - d. Seats are adjusted to children.
 - e. The room and furniture within it are free from dust.
 - f. Children showing evidences of illness are given nurse's attention.
 - g. Sick pupils are eliminated from attendance at school.
 - h. Pupils are careful to keep hands clean when handling materials.
 - i. Pupils and teacher practice good health habits.

PUBLIC SCHOOLS WEEK

The week beginning April 26, 1937, will be celebrated in California as Public Schools Week. This is the period set apart by the schools for visits from the general public, and parents in particular. Every person is invited and welcomed to take part in this gala week in the annals of the public schools. Public school administrators

should plan a program that will command the attention of civic and other community groups and bring them into closer contact with the school and its problems. The interest in Public Schools Week provides an opportunity for a long term program of activities designed to develop a better understanding of the purposes and characteristics of the modern education program by the lay public.

The success of any enterprise depends largely upon the nature of public sentiment concerning it. This is particularly true in the case of public enterprises which derive their support largely from public funds. Such enterprises must at all times convince the public at large of their fundamental worth if society is to continue their maintenance. Nowhere does this principle apply with more force than to public education.

Copies of the bulletin, *Suggestions for Public Schools Week Activities*, State of California Department of Education Bulletin No. 2, January 15, 1936, were distributed to schools last year. A few copies remain. These may be secured upon request.

DEMONSTRATION ELEMENTARY SCHOOL AT THE UNIVERSITY OF CALIFORNIA SUMMER SESSION

The University of California will conduct a demonstration elementary school during the 1937 Summer Session. Selected teachers from schools of California and the East will demonstrate modern procedures in grades one to eight. Through the generous cooperation of the Berkeley superintendent of schools and the Board of Education, the school will be housed in one of the Berkeley school buildings. A comprehensive course dealing with the integrated curriculum of the elementary school will be offered in three sections: for kindergarten and primary teachers, for intermediate and upper grade teachers, and for rural teachers. Laboratory work in connection with this course will involve regular observation in the demonstration school and first hand study of the civic, industrial, and cultural resources of the Bay Region. This course will be offered by Dr. John A. Hockett of the School of Education of the University and Miss Helen Heffernan of the State Department of Education, who will also cooperate in the management of the demonstration school. Mrs. Gladys Potter of the State Department of Education will act as principal of the demonstration school.

WEST COAST SCHOOL OF NATURE STUDY

The West Coast School of Nature Study, unique outdoor school sponsored by the Science Department of San Jose State College, will

hold a special one week session in the valley March 21-27, 1937, and the teachers of California and the Pacific Coast are invited to attend.

Accommodations at Furnace Creek Ranch will be in readiness for the session, and a six day program of diversified activity has been arranged. Teachers who attend will enjoy the unusual privilege of seeing Death Valley with the aid of a trained staff of nature study experts.

Insects, birds, trees, and shrubs, flowers, geology, and physiography, are separately considered by different trail groups, each group devoting a day to each particular subject under the guidance of an instructor specially trained in that field.

Dr. Gayle Pickwell, ornithologist; Dr. P. Victor Peterson, head of the San Jose State College science department and the West Coast School; Miss Emily Smith, botanist; Fred Buss, geologist; Dr. Carl Duncan, entomologist; Dr. Karl S. Hazeltine, nature study specialist; and Miss Gertrude Witherspoon, faculty members of San Jose State College, all well known in the natural science field, comprise the staff.

A typical day with the West Coast School finds the group assembled for breakfast at 7 a. m., on the trail at 8, lunching in some picturesque or secluded spot at noon, and back at 3 for an afternoon of freedom and relaxation.

Nights are devoted to astronomy, teaching of nature study, singing, games, and the like.

The West Coast School does not "rough it." Hikes are not strenuous. Comfortable accommodations are secured in carefully chosen inns and hotels where food is good and lodging adequate. Except for noon lunches, hot meals are eaten indoors.

Two units of college credit at San Jose State College will be given for the week's work, this credit being applicable toward general elementary or general secondary credentials issued by the State Department of Education.

The week's Death Valley program will not supplant or alter the West Coast School's regular four week summer program, to be held this year at Idyllwild, June 20-26; Sequoia National Park, June 27-July 3; and Fallen Leaf, Lake Tahoe, July 4-10, and July 11-17.

CLARENCE R. STONE

The editors of the *California Journal of Elementary Education* regret the error which appeared in an author's name in the contents of Volume V, Number 2, November, 1936. Clarence R. Stone is the author of "How to Adapt Reading Instruction to the Varying Needs of Children," not Clarence R. Strong.

SUPERVISION CONFRONTS A CHANGING CURRICULUM

GORDON N. MACKENZIE, *Instructor in Education,
Stanford University*

In recent years, the school curriculum has been a focal point of criticism, conflict, and activity. Out of this welter is emerging a new and modern curriculum which differs in many fundamental respects from the placidly accepted curriculum of a few years ago. Supervision, however, has not experienced the same degree of change. The resultant clash and inconsistency on fundamental issues looms as an impediment to further curriculum development and progress. An examination of the principal features of the modern curriculum indicates the nature of this conflict and the type of reform needed in supervision for its elimination.

BASES OF THE MODERN CURRICULUM

The modern curriculum is an outgrowth and expression of the principles of democracy and is intended to aid in the achievement of democratic ideals. As the concept of democracy is expanded and altered in the presence of shifting social and technological conditions, so should the school curriculum which serves it be modified and revised in order that its functional values may be maintained at a maximum. The experimental philosophy underlying the modern curriculum further explains its experimental nature and its continuous state of change. The psychology of the modern curriculum is distinguished by its emphasis on pupil purposes, maturation levels, integrating experiences, and the personality effects of all aspects of school life.

If a supervisory program is to further the aims of education significantly, it should have the same social, philosophical, and psychological bases as the curriculum through which it seeks to work. Much supervision still retains the autocratic characteristics reminiscent of an earlier period when supervision and other aspects of education adopted or copied the philosophy of modern business organization. This philosophy is inadequate today if supervision is to lead in the development and improvement of the modern curriculum—if supervision is to define and assist other educational workers to define an educational philosophy appropriate for evolving, contemporary, social conditions.

The changed nature of the curriculum and of the goals of education, which will be the next elements to be considered, necessitates an harmonious working and a basic agreement among the educators guiding a particular group of children. Unless this condition exists, a developmental program providing for the continuous and rounded growth of children in the desired abilities appears to be an impossibility.

ALL ELEMENTS OF EXPERIENCE CONSTITUTE THE CURRICULUM

The modern curriculum which is defined as all elements of the child's experience should be clearly distinguished from the course of study which is merely a collection or catalogue of suggestions as to aims, materials, and learning activities which may be used in working with any particular child. This is a broader conception than the older or more narrow view in which the curriculum, the course of study, and the textbook within a particular subject field were one and the same thing. Defining the curriculum as all elements of the child's experience and recognizing that every experience may result in multiple learnings, the school has become concerned with the miseducative aspects of authoritarian disciplinary practices, maladjusted teachers, honor rolls, and non-functional school tasks.

A supervisory program based upon classroom visitation for the purpose of checking on methods of teaching subject-matter is inadequate and probably detrimental because of its narrow emphasis. A recognition of the possibility of multiple learnings in any single experience means that the school faces a difficult task in developing a program in which all elements harmoniously contribute to the attainment of agreed-upon goals. It is an easy matter for a teacher's eagerness for high standards and thorough hard work to result in dishonesty and evasion on the part of students. It is problems such as these, problems which encompass all of the activities and experiences going on in the school, to which supervision might well direct its attention. Child-centered rather than subject-centered supervisors appear to be needed for this task.

THE MODERN CURRICULUM AIMS TO DEVELOP CONTROLS OF CONDUCT

Contrasted with the knowledge of subject-matter which was so prominent in the curriculum aims of the older school, stand the controls of conduct which the modern curriculum seeks to develop. These are outgrowths of appropriate attitudes, understandings, and skills. Typical samples of the modern aims are a scientific attitude,

a respect for personality, an ability to read and write and study and the effective use of these abilities, an understanding of the necessity of man's adapting to changing conditions, and the taking of active steps to make adaptations. In the modern school the child has the time and the freedom for the practice and testing of his controls of conduct. Thus the school through observation of actual behavior may evaluate his progress and guide his continued development.

A supervisory program which is rigidly organized along subject-matter lines and which makes much use of the usual rating and checklist devices is not properly prepared to provide leadership in this situation. Instead of being narrowly specialized, supervision should be based on a broad and deep scholarship, not only in several of the usual subject-fields but in the area of child growth and development. With this kind of background it is more likely that supervision will be in a position to provide teachers and administrators with cooperation and assistance in studying and evaluating methods and materials to the end that children may develop the desired controls of conduct.

PUPIL PARTICIPATION IN ALL ASPECTS OF LEARNING

If children are to develop the wide variety of controls of conduct already suggested, it becomes obvious that they must have experience in all aspects of learning in which growth is desired. In the modern curriculum this learning experience is extended beyond the mere performing of assigned tasks which still is the principal activity in many schools. Children are encouraged to develop their own purposes, to plan for the achievement of these purposes, to carry out their plans, and to evaluate each step of the process including the final results.

This type of instructional program requires a change in supervisory activities. Demonstration lessons, arranged hastily without knowledge of the plans and purposes of individual students, appear to be contrary to the basic factor of giving consideration to pupil purposes and plans. Likewise, directions from a central office indicating the type of lesson to be conducted for the inspection and evaluation of the supervisory officer run contrary to the type of pupil participation outlined, and introduces an authoritarian approach into a school situation which presumes to be democratic. In place of the short and hurried visits supervisors must find time to study and to assist in the development of children who can purpose, plan, execute, and evaluate their own activities.

A NEED FOR MANY KINDS OF LEARNING ACTIVITIES

The development of controls of conduct in many areas of life necessitates not only pupil participation in all aspects of learning, but also the use of a wide variety of learning activities. The study of books followed by recitations and examinations is not adequate to develop the controls of conduct already suggested. As a student seeks to satisfy his purposes, he will find need for discussions, interviews, maps, charts, field trips, surveys, reports, speeches, dramatizations, construction, modeling, and the like. Controls of conduct which will function in future and unfamiliar situations require as a background a multiplicity and diversity of experiences and learning activities such as has been indicated.

Supervision should assist in the use of these many activities to the greatest advantage. This will probably necessitate a decreased concern for assignments, supervised study, the number of questions asked, attention scores, and similar problems of a school which was limited to book learning.

A NEW DEFINITION OF SUBJECT-MATTER

The traditional school conceived its main task to be that of studying and mastering the facts, principles, and generalizations of the various subject fields such as arithmetic, history, and science. This was its subject-matter. The modern curriculum which places pupil purposes ahead of organized bodies of subject-matter has a different concept. Any and all of the facts, principles, or generalizations which a student may use to satisfy a particular purpose constitutes his subject-matter. These materials will probably be drawn from several disciplines and the organizing basis will be a pupil's purpose rather than a traditional subject field. Until the process of satisfying a purpose is underway, it is impossible to state what the subject-matter for the purposing child will be.

This definition of subject-matter disturbs the usual method and plan of supervision by specialists. The use of drives or the focusing of attention for a year on a special subject field without concern for the whole of the school's program is a violation of the principle of psychological organization of subject-matter around student purposes. Supervision will probably continue to have need for a thorough knowledge and understanding of certain specialized aspects of human interest, but these must be known and understood in their naturally intimate relation to the whole of human experience. The function of this type of specialist may possibly be that of pointing out the possibilities for an enrichment of child life through contact

with particular areas and the method may be one of suggestion and help in defining and satisfying purposes rather than one of attempting to transmit, by force if necessary, an isolated, logically organized body of subject-matter.

A NEW RESPONSIBILITY FOR TEACHERS

In the modern school the teacher is not regarded as a mere conveyor of subject-matter and lofty ideals, but as an expert professional diagnostician of the child's educational needs. It becomes the teacher's responsibility to adjust the curriculum to pupil needs on the basis of these diagnoses. The depth of professional knowledge required for this task is readily obvious.

It is just as wrong to assume that a central office can prescribe in detail the materials to be taught to each child, and the methods to be used, as to assume that a city, county, or state health officer can give detailed information to the doctors in his governmental area concerning the treatment of their patients. Individual differences in pupil growth and development make it undesirable to suggest specific learning activities without a preliminary diagnosis. Thus, greater responsibility should be placed on the teacher, and in doing this a new kind of supervisory guidance is needed.

EVALUATION AS A CONTINUOUS PROCESS

Evaluation in the modern curriculum is a process in which both the pupils and the teacher are continually weighing activities in terms of their value in achieving worthy pupil purposes. Day to day plans are evaluated and altered in order that purposes may be better achieved and controls of conduct more efficiently developed. Thus, evaluation as a day to day check on growth and progress overshadows in importance, but does not replace, the final testing of end products.

If teachers and pupils are to place primary emphasis on this form of evaluation and are to use it successfully, supervisors probably should cease to evaluate activities in terms of only the external standards of the usual measuring devices and should inform themselves of pupil and teacher purposes. A knowledge of these purposes and of the curriculum developed to realize these purposes should supplant the usual knowledge of one or two subject-matter compartments of the course of study.

COMMUNITY OBLIGATIONS

The experimental philosophy of the modern curriculum accepts the fact of continuous social change and the needed readjustments

which are thus made necessary. Changes may be both desirable and undesirable. The social problems resulting from the fact of social change have such important implications for the continuance of a desirable form of social life that the school should make some contribution to the solution of these problems. The school's task seems to have three aspects: (1) examine change in progress, (2) aid in the adjustment and transition to new conditions that are inevitable, (3) assist in defining changes that would be desirable but which are not inevitable, and facilitate transitions in harmony with these. Guides for the evaluation of change will come from a continuous redefinition of our social ideals and educational goals in relation to our democratic social philosophy and current social trends. This intimate relation between the school and the social process necessitates a partnership of school and community in the form of lay participation in curriculum building and student participation in socially worth while community activities.

Supervision should provide leadership in developing a community support in the form of time, thought, energy, and finances. This will be necessary if cooperation and understanding on curriculum matters and pupil participation in socially useful community activities are to result.

SUMMARY OF THE IMPLICATIONS FOR SUPERVISION

This statement of the characteristics of the modern curriculum, even though it is brief and incomplete, indicates several important implications for supervision.

1. A supervisory program should be based upon the same philosophy as the curriculum which it seeks to supervise if it is to render its maximum service. This program should employ methods and activities which are thoroughly consistent with its philosophy.

2. Supervision should focus its attention directly upon the development of pupil controls of conduct, which are the primary aims of the modern curriculum. This will necessitate the recognition of pupil and teacher purposes, the wide variety of learning activities needed, and the desirability of substituting a psychological organization of subject-matter around pupil purposes for the usual compartmentalized organization into disciplines. Supervision may need to be reorganized along other than special subject lines. It may be necessary to give less attention to questioning, assignments, supervised study, subject-matter lesson plans and similar concomitants of book learning and to give more consideration to the evaluation and improvement of other types of learning activities. Much of the checking and rating of methods of teaching and the exalting of external standards of

achievement might well be supplanted by techniques aimed to stimulate teacher and pupil purposing, planning, executing, and evaluating. A richer and deeper scholarship on the part of supervisors will be invaluable, but of even greater importance is an ability to reorganize and reinterpret the elements in that scholarship in terms of the needs and purposes of children.

3. The course of study which has been described as a source of suggestions, aims, materials, and learning activities becomes of great value to the teacher in guiding and shaping the child's experiences. Supervision should provide leadership in preparing courses of study and in getting them into use.

4. Textbooks, supplementary books, and other instructional materials and activities represent such an important aspect of curriculum and course of study problems, in view of the new definition of subject-matter and the use of a wide variety of activities, that both supervisors and those working directly with students should participate in their selection.

5. Supervision should provide leadership in interpreting the educational program to the community and in developing a community philosophy of education appropriate for present day life. Community participation in curriculum building and in providing real social experiences for children should be secured.

6. Supervisory leadership should be democratic in a society which has a school curriculum aimed to attain democratic ideals. This type of leadership necessitates a faith in the integrity and professional expertness of coworkers and the development of a program which will inspire them to their maximum attainment. Democratic supervisory leadership will assist a group to define its needs and then assist in the satisfaction of these needs. Democratic leadership does not proceed on the basis of authority. It suggests, guides, and gives opportunity for experimental learning. It is cooperative and it encourages individual initiative. It gives recognition to the participation of fellow workers in the planning and executing of supervisory programs. The prospect of success for democratic supervisory leadership is enhanced by an able, professionally trained group of workers. Democratic leadership anticipates changes in methods and materials and proceeds in a scientific spirit.¹

7. A creative supervisory leadership is needed by the modern curriculum to encourage creativeness on the part of educational workers in facing new tasks and to assist in the development of learning activities and experiences which will implement the defined educational philosophy.

¹ Emory S. Bogardus, *Leaders and Leadership*. New York: D. Appleton-Century Company, 1931 pp. 22, 191, 265.

8. In-service training programs should deal with actual teaching problems encountered in achieving the aims of the curriculum and with needs recognized by teachers. Individual differences exist among teachers just as they exist among children and these differences should be considered in planning programs. Many present in-service training programs have no relation to the aims of the modern curriculum and are contrary to its underlying philosophy.

9. Much of the success of the modern curriculum is dependent upon the skill of teachers in diagnosing individual pupil difficulties, in developing specific controls of conduct, and in satisfying individual pupil needs. For this reason supervision might well direct much of its attention to these problems.

10. Supervision should continuously endeavor to reevaluate its activities in terms of the aims and the underlying philosophy of the educational program which it is to supervise. Although many of the supervisory techniques and methods now in use undoubtedly impede the development of the modern curriculum in the direction of its goals, they need not necessarily be abandoned entirely. It is probable that in many cases methods can be altered and techniques used in such a way that they will contribute toward the achievement of aims.

The fact that the new curriculum presents a challenge to supervision is clear. The means by which this challenge is to be answered requires the contribution of many constructive and creative minds, and serious research. Not only must the basic philosophy of supervision be clarified but the methods for fulfilling this philosophy must be developed. The task is one which will never be completed because of the changing society which is being served. Supervision faces a two-fold task: (1) to provide leadership in adapting the curriculum to the needs of this society, and (2) to adjust and adapt its own philosophy and methods so that they will harmonize with this developing curriculum and improve its vitality and functioning quality.

ARITHMETIC: A BASIC SOCIAL STUDY¹

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Arithmetic once held a relatively secure and enviable position in the curriculum of the elementary schools. Not only the subject-matter but the study of the subject-matter was held in high repute. To be a good arithmetician was to be held in high regard.

POSITION OF ARITHMETIC IN THE MODERN PROGRAM

Today the story is different. For the past twenty-five or more years direct and subtle attacks have been made upon the arithmetic curriculum. First we were informed that the study of arithmetic as a discipline is ineffective. Then it was brought out that arithmetic is not often used in social intercourse and that the small amount which is functional socially can easily be acquired through vicarious experiencing. Finally we were told that instruction in that field is contrary to the best interests of the child.

The case is nicely put in a course of study which is widely used in this area. It states:

We are not attempting to reconcile the artificial science of arithmetic with a child-centered program. . . . In the primary grades where the uses of numbers are informal and numbers are used to meet the felt needs of children in solving immediate problems, the child-centered program and arithmetic are reconciled. There are relatively few cases, however, in which nine, ten, and eleven year old children will need, in their daily experiences as children, the number facts and processes which society feels they must acquire in order to meet problems as adults. Perhaps the simplest approach to make to the situation is, that all of us in life have certain jobs to perform whether they interest us or not, and that one of the social adjustments which each person must make is to recognize that social requirements are of such a nature that whether we like them or not, as long as they are social requirements, we must conform. We anticipate the time when the grade placement in arithmetic will be such that it does not conflict with our philosophy and our psychology. Since, at the present time, tradition clings tenaciously to arithmetic as one of the basic needs of mankind, we feel that it is the better part of prudence to strip it to the fundamentals and to teach it effectively. There is little need to attempt to wreck progressive education in its infancy on so small, but so dangerous, a shoal as arithmetic.²

Arithmetic has become merely an educational shoal which, however, appears to have considerable latent ability to disturb educational navigation. Who will rise to defend it? Who would wish to teach a field in which experiencing has so little apparent value?

¹ Presented before the Los Angeles City Teachers Institute, September 8, 1936.

² "Arithmetic and a Child-centered Program," *Teachers' Guide, Intermediate Unit, Los Angeles County Schools*. Los Angeles: Los Angeles County Board of Education, 1931, pp. 161-162.

Several years ago Dr. Charles Hubbard Judd came before the National Education Association with a warning concerning this point. In a speech entitled, "The Fallacy of Calling Certain School Subjects Tool Subjects,"¹ he defended arithmetic and reading and called for a more serious consideration of the real intrinsic natures of these important fields. Dr. Judd cautioned against the uncritical acceptance of catch terms and appealing phrases. He stated: "Words are the embodiments of discriminations and the epitomes of theory."² He indicated that truth is not always easily apparent or, as has been said, "it is the submerged part of an iceberg which constitutes the menace to navigation."

No one can reasonably defend an instructional program which does not function to produce better social adjustment. However, there can be defensible differences of opinion with regard to which experiences are best for these purposes. At the present time the so-called social studies appear to be most generally accepted as those best adapted to the production of social development. The fact that they were late in being incorporated within the curriculum is given slight consideration.

Arithmetic is rarely if ever included as a social study. That seems strange, but since language in general is likewise commonly excluded, one senses that perhaps the entire field of communication is not conceived to have social significance. This suggests the desirability of a review of the social imports of the allegedly non-social or un-social studies.

ARITHMETIC PERMEATES ALL LIFE EXPERIENCES

We are to discuss arithmetic as a basic social study. We shall begin by pointing out that arithmetic has been generally misconceived as being synonymous with manipulative work with number. This misconception has great bearing upon the current disrepute of the arithmetic curriculum.

Arithmetic as a social phenomenon is concerned with quantity and with quantitative relationships. As such, arithmetic development precedes number concepts and includes them as one phase of its subject-matter. The primary number symbols are no more important to arithmetic than are the letters of the alphabet to verbal communication or note symbols to music. Manipulative number work is to arithmetic what spelling and composition are to verbal expressions.

In this broad sense, arithmetic discriminations permeate the whole of life's experiences. They are the dominant concern of every

¹ *Proceedings of the Sixty-fifth Annual Meeting of the National Education Association, July 3-8, 1927, Vol. LXV.* Washington: National Education Association, 1927, pp. 249-252.

² *Ibid.*, p. 249.

one. It has been stated that, "Whatever exists at all, exists in some quantity," and that, "If it exists in some quantity it can be measured."¹ Arithmetic as a psychological process is the pursuit of the identification of quantitative existence and of the measurement thereof.

Man's conscious life is devoted to quantitative discrimination. He must create for himself system and order that he may comprehend his experiences. The basic concepts of constancy and variation are foundational to this creative act. Measurement is the great tool which is used to reduce man's environment to comprehensible terms.

THE MEASUREMENT OF TIME

Societies have experienced rather generally certain fundamental influences. Among those is time. No one knows what time is, yet every normal person has occasion to measure it and to utilize such measurements in governing his social behavior.

Our arithmetic instruction with regard to time has usually consisted in teaching the children to tell time by reading the clock and in demanding that they memorize the tables of time units. Such instruction fails to achieve a knowledge of time which is demanded for social intercourse.

Miss Kelty², a few years ago, made a study of the time expressions which occurred in one hundred books then used in the primary grades of the schools. She discovered over one hundred such expressions, only thirty-two of which were in common use. Furthermore not over one-tenth of the expressions occurred as repetitions in half of the books. A test was made, using certain of these common expressions. Results indicated that they were comprehended with only 6 per cent of accuracy by the low fourth grade and by only 58 per cent of accuracy by the high sixth grade. Evidently instruction had not been sufficient to enable those children to interpret social references to time.

It is interesting to note that throughout the ages men have been intrigued by the pursuit of the measurement of time. Calendars which systematized the larger time units were developed with fair accuracy hundreds of years ago. The measurement of the smaller units of time has been considerably more difficult. The story of social demand which occasioned the building of the sun-dial, the water-clock, the hour-glass, and the modern electric clock is a story

¹E. L. Thorndike, "The Nature, Purposes, and General Methods of Measurements of Educational Products," Part II, *The Social Studies in the Elementary and Secondary School*. The Seventeenth Yearbook of the National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Company, 1919, p. 16.

²M. G. Kelty, "Time Expression Comprehended by Children of the Elementary School," *Elementary School Journal*, XXV (March, April, 1925), 522-528, 607-618.

with social significance. In 1713, the British Government offered a prize of approximately \$50,000 to anyone who would invent a time piece, the accuracy of which was demonstrable.¹ The clock which won the prize for its maker was not as good as the common dollar-watch which is offered for sale today. The measurement of time evidently has great social significance. The mere instruction in how to tell time does not satisfy this social need.

INTERNATIONAL UNITY

During recent months we have observed the failure of man's latest attempt at international understanding. The League of Nations has not been able to establish control over nations that are activated by selfish points of view. Some of us are inclined to see in that failure a dismal future for civic or social understanding. In doing so, we fail to recall that in the field of arithmetic great strides have been made toward international unity.

For example, this is the year 1936. What does that mean? It is not the 1936th year since time began. It is not even the 1936th year of recorded history of man's activities. It is the 1936th year of the Christian Era. The point of origin for this measurement of time was intended to be the birth of Christ. But more than half the people of the world are not Christians. Yet the non-Christians have fairly generally accepted the Christian time for the designation of the years.

Similarly, this is Tuesday, September eighth, and about two o'clock. Each of these indices of time represents a great social agreement. The day and the time of day is dependent upon our acceptance of the Greenwich Meridian as the Prime Meridian. This has become a general concept of the civilized world.

Standard Time is not the same as solar time, and daylight saving time incorporates still another factor. The agreement to standardize the time of the day within great areas of longitude which are 15 degrees in width is a social accomplishment of no mean significance.

Time is a universal factor which has such great social importance that people come to agreement with regard to it. The study of time phenomena and their measurement are phases of arithmetic.

MEASUREMENT OF COMMODITIES

Within and among social groups various types of possessions become of importance in trade. This social process produces a need for means for measuring such commodities. The evolution of systems of weights and measurements is a valuable social achievement. We

¹ *Telling Time Throughout the Centuries*. Committee on Materials of Instruction of the American Council on Education. Achievements of Civilization, No. 5. Washington: American Council on Education, 1933, p. 47.

fail to teach these products in their true social settings when we teach merely the manipulation of denominative numbers. Just as we have secured a measurable degree of international unity with regard to time, so also has there been a general agreement concerning the measurements of other types of social commodities and concepts. Arithmetic as a social study is concerned with such agreements and it is part of the arithmetic instructional programs to promote them.

For example, two great systems are in current use for the measurement of many types of social commodities, namely, the metric system and the non-metric systems. Our society has been slow in its acceptance of the demonstrably superior system. The metric system is conceptually more valid and it is demonstrably simpler to use than is our customary system of measurement. Some one has estimated that over 90 per cent of the work with denominative numbers could be eliminated from the arithmetic books if we adopt the metric system.

NUMBER CONCEPTS AND A NUMBER SYSTEM UNIVERSAL SOCIAL NECESSITIES

There are many cumbersome social practices which we may legitimately scrutinize in this manner. For instance, number concepts and a number system are universal social necessities. We have an excellent system of notation but it does not completely reveal itself in the number names and number expression below sixty.

The names of the figures in the second decade of numbers are demonstrably inferior. Children experience great difficulty in accomplishing them and even in adult usage the names produce difficulty. In the reports of the wreck of the dirigible Akron the newspapers indicate that the helmsman mistook an order to change the direction of the ship 15 degrees to be an order to change it 50 degrees. Many men lost their lives. They may be sacrifices to the failure of arithmetic teachers to stress the real social values of their subject. If we can amend our federal Constitution to prohibit child labor in industry, we certainly should be able to secure a simple change of measurement which would result in reducing their labor in schools.

THE SOCIAL ADVANTAGES OF THE DECIMAL SYSTEM

The social value of facile systems of notation and measurement can not be easily overestimated. We have heard much concerning the so-called industrial revolution. Almost never has our attention been called to the social changes which were necessary accompaniments. The introduction of the decimal system of notation just

previous to the great periods of inventions and industrial development probably did not occur by chance. Prior to the use of the decimal system it is recorded that attendance upon at least four great universities would have been necessary for one to learn to manipulate number relations which are now accomplished with facility by normal children in the fourth grade of the elementary school. If you doubt this statement, try to express in terms of Roman notation the relation between the diameter and the circumference of a circle. Or, if you think that simple methods for expression are not of social importance, try to express in Roman notation the specifications for our federal budget. Special consideration should be paid to the deficits.

SOCIAL COMMUNICATIONS AND NUMBER SYMBOLS

Social communication does not always demand number symbols for the reason that social concepts are not always refined to a degree expressible by numbers. This does not imply, however, that such communicative acts are nonarithmetical in nature. It has been shown that by far the majority of our words connote some form of arithmetic discrimination. Similarly, as the words become arranged in sequences to express relationships the governing principles are likewise arithmetic.

The root meaning of a sentence is comparable to an arithmetic equation. Modifiers are used to intensify or reduce the root meaning. Both the original and the modified expressions involve arithmetic. The person and number of pronouns and verbs certainly are arithmetic concepts. The agreement between the subject and verb aspects of an expression is an arithmetic relationship.

Arithmetic discriminations are likewise basic to expression in the field of music. It is not uncommon for children to learn to distinguish whole notes, quarter notes, half notes, etc., before the customary courses of study in arithmetic provides for instruction in the meaning of such quantities.

ARITHMETIC A BASIC SOCIAL STUDY

Arithmetic is a basic social study for the reason that arithmetic concepts are among those which are most fundamental to society. The study of those concepts and of their social values has an importance which is second to that of no other studies. In order to accomplish these values we need a new deal in arithmetic instruction. Teachers and administrators have evaluated arithmetic instruction in the light of its ability to produce manipulative automatons with the work with numbers. Almost no attempt has been made to produce insightful understanding with which to control that behavior.

Few teachers and almost no children can give acceptable explanations for inverting the divisor and multiplying when the divisor is a common fraction. Rules are taught as directions for behavior rather than as summaries of observed relationships.

That form of arithmetic instruction is not socially valuable. Social discrimination is developed only when the student is led to discover the purposes and reasons which govern behavior. That societies have crucial needs for arithmetic insightfulness has been amply illustrated. Arithmetic as a social study will assist in meeting those needs only when it is taught with that goal in mind.

The objection may be advanced that there is not time to accomplish this in the time at present allotted to arithmetic. Before we sustain that objection we should examine current practices to determine how economical they are.

CURRENT PRACTICES UNECONOMICAL

Reports in the professional literature appear to establish the point that children learn arithmetic processes more readily and better through incidental experiencing than they do under direct instruction. Such reports are not altogether convincing, but they are receiving a great deal of credence generally. Improvement in instruction will probably not come from indirect or vicarious experiencing. Educating is a complicated and an intricate process, the serious study of which is worthy of the best minds in the profession.

Investigations of current teaching methods and materials for instruction reveal discrepancies which may be fruitful sources for improvement. It appears that proficiency is sought separately with each of the so-called fundamental processes. Actually these processes are opposites. If they were considered together, they would tend to facilitate each other.

Other studies indicate that children are required to attempt performance at higher levels of work when the children are not sufficiently proficient with the use of necessary lower level patterns of behavior. For example, over 70 per cent of the time which a certain group of children used to accomplish a set of multiplication examples was devoted to work with the carry. That aspect of the process was likewise a most fruitful source of error.¹ Since there are only 219 addition facts which can occur in such examples and at least two-thirds of them offer no unusual difficulty, it seems very likely that substantial help could be rendered in this case through a redirection of teaching.

¹Melba Koontz, and P. L. Spencer, "An Analytical Study of Certain Aspects of the Multiplication Process," *California Journal of Elementary Education*. 1 (May, 1933), 168-176.

Similarly, we have recently witnessed the assignment of long division to the fifth grade for the reason that it is too difficult for accomplishment by the fourth grade pupils. Long division includes certain specific subtraction, multiplication, and addition facts and examples. A study of the accomplishment of fourth grade children with these materials reveals a very poor degree of proficiency. When that is corrected, the children are able to accomplish the division aspects with ease.

Correcting the subtraction deficiencies demands careful planning. There are 44,550 subtraction situations in the division examples which occur with one digit and two digit divisors.¹ Nearly one-half of those examples can occur with only one divisor and one dividend. It is impossible to teach such a mass of material specifically. Consequently, type cases must be determined and the teaching of them must be generalized. This has been done with the result that children in a third grade have been made practically perfect in their work with those examples.² The average fifth grade is probably 30 per cent deficient.

Practically all writers on methods tend to favor the use of two methods for determining the size of the quotient figures. A careful study of all the possible dividend-divisor combinations below the divisor 100 fails to substantiate their advice.³

The greatest saving which can be made in facilitating the estimating of quotient figures is for children to learn to use the figures of the second decade as they would a single digit number.

THE WHY OF ARITHMETIC RELATIONS ESSENTIAL

Along with these and other suggested changes in the content of the materials of instruction must come the discovery of the whys of arithmetic relations. The common meaning today for the expression, "check your answers," is to determine the correctness of the calculation. The apparent reasonableness or nonreasonableness of an answer receives little attention. Brueckner⁴ has reported a detailed study to determine the sources of difficulty with decimal expressions. After much painstaking study he reports that the principal source of difficulty with decimals is with the decimal point. That appears to be a reasonable conclusion and it is particularly likely when one discovers that practically none of the current textbooks explain the

¹ P. L. Spencer, "A Study of Subtraction Cases Found in Long Division Examples Having One Digit or Two Digit Divisors," *Claremont Colleges Studies in Arithmetic*, No. 1, April, 1933.

² This was accomplished under actual classroom assignments by Miss Marguerite Nordahl as a teacher in the Hamilton School of Pomona, California. Miss Nordahl is now on the staff at San Diego State College.

³ P. L. Spencer, "How Shall We Teach the Division Process," *Philippine Journal of Education*, XVII (June, July, and August, 1933), 6-10, 80-82, 156-161.

⁴ L. J. Brueckner, "Analysis of Difficulties in Decimals," *Elementary School Journal*, XXIX (September, 1928), 32-41.

functional meaning or use of a decimal point.¹ In manipulative work the points are moved to the right or to the left with about the same degree of conceptual control which was manifested by the old lady in her test for rotten eggs.

It seems that an elderly lady had been having some unpleasant experiences with the eggs she secured from peddlers who came to her door. She sought a way to avoid the unpleasantness and finally it was revealed to her. She boasted of her knowledge before her neighbor friends and one who had experienced similar difficulty requested to be informed of the old lady's technique. This is what the neighbor was told. "You take a tub of water. Then you just place the eggs in the water. The good eggs either sink or float—I have forgotten which." The old lady was an excellent technician but she utterly lacked the conceptual insight necessary to put her technique into useful application. This is the way we have tried to train our children.

EVERY TEACHER A TEACHER OF ARITHMETIC

Sufficient instances have been included to show that we should not refrain from the teaching of arithmetic because we lack the time to give it such consideration. The time now being spent upon it is probably sufficient if it were more efficiently expanded. The alleged drudgery in arithmetic is largely unnecessary. It has arisen because the conceptual aspects of the work have been ignored. Arithmetic as a social study pulsates with vitality. Because arithmetic discriminations permeate all of life's activities, every teacher must be a teacher of arithmetic. This is no call to teach because tradition demands it. Arithmetic has values which are demonstrably worth while. When taught effectively, it is a basic social experience.

¹ Marguerite Nordahl, "An Evaluation of Four Methods of Teaching Decimal Fractions," *California Journal of Elementary Education*, II (November, 1933, February, 1934), 75-79, 137-143.

MODERNIZING THE TEACHING OF ARITHMETIC

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Arithmetic probably causes more school failures in the middle grades than any other one subject. The inferiority feelings caused by these failures and the mental anguish aroused by the continual struggle with arithmetic has been sufficient to warp the personality of many a school child. Teachers are not responsible for this situation as they, along with the children, are victims of a system of handling arithmetic which has had little regard for the emotional stability of either pupils or teacher. In attempting to follow the traditional set-up, many teachers find themselves nervously exhausted from their intensive efforts, and considerably discouraged at the meagre results. With such conditions existing in most of our schools, it is time to examine the traditional practices in the teaching of arithmetic, find out what is wrong, and suggest steps for improving the situation.

DESCRIPTION OF TRADITIONAL PRACTICES IN THE TEACHING OF ARITHMETIC

The traditional method of teaching arithmetic assumes that arithmetic is a tool or skill subject to be learned largely through drill of a mechanical nature without reference to use or social significance. In the traditional plan, arithmetic consists of a large number of isolated facts and skills which are supposed to be learned most economically through formal repetition. It is not considered necessary for pupils to understand the meaning of number or the meaning of the processes involved in computation, but simply to learn the separate isolated elements of arithmetic. A period of from twenty to forty minutes a day is usually devoted to drill with little reference to the social value of arithmetic, or to situations involving arithmetic in the experiences of the pupils. Pupils are arbitrarily told what to do and then are supposed, through repetition, to master one skill sufficiently to proceed to the learning of a new skill in the same way. The emphasis is placed on computation and practically no thought is given to the needs experienced by pupils for the actual use of those processes, or to the social implications of the content of arithmetic. The meaning of number is reduced to a minimum and the intelligent use of number is almost entirely neglected in school situations outside the arithmetic period.

The traditional grade placement of the major processes is usually somewhat as follows: addition and subtraction combinations, second

grade; multiplication combinations, third grade; division, fourth grade; fractions, fifth grade; decimals and percentage, sixth grade. In the California State Series of arithmetic text books¹ the usual placement of the processes has been modified considerably. The first formal processes in this series are begun in the high third grade and certain other processes are advanced, but there are still many operations and processes that need allocation in order to be placed where they can be learned most economically.

In arrangement, the processes to be learned are lined up like a set of hurdles and the pupils are required to clear the hurdles grade by grade. Those who cannot keep up in the race are penalized by failure and are required to repeat the race. Teachers justify failing such pupils on the grounds that it is better for pupils to repeat the work and get a firm foundation than to go on to new processes beyond their capacity. Such reasoning seems logical but it fails to take account of the changed attitude of the pupil toward the subject and probably toward the whole school program. The attitude of pupils toward their work is of the utmost importance in determining the degree of success which pupils are to enjoy. Because of the feelings of inferiority and discouragement which accompany failure it is not uncommon for pupils actually to make a poorer showing the second time over the work.

Variations of the traditional method and placement of processes as here described are numerous, but in the main this description fits our traditional practices which are still the ones used by the vast majority of teachers throughout the country.

WHAT IS WRONG WITH TRADITIONAL PRACTICES IN THE TEACHING OF ARITHMETIC?

In the past, little attention has been given to children's ability to learn each of the various processes. The textbook writers have arranged the material in what seemed to them to be a logical mathematical order and then have left it to the teachers to drill the material into immature heads as best they can. Recent investigations indicate that the traditional grade placement of processes is not in accord with the ability of pupils to do the work.² The Northern Illinois Committee of Seven, headed by Dr. Carleton Washburne, has done much to show that we are attempting to teach practically all of

¹ Leo J. Brueckner, and Others, *The Triangle Arithmetics*. California State Series. Philadelphia: John C. Winston Company, 1928.

² Raymond Osborne, and Harry Gillet, "Mental Age Is Important Factor in Teaching Arithmetic," *Nations Schools*, XII (July, 1933), 19-24.

Carleton W. Washburne, "Mental Age and the Arithmetic Curriculum," *Journal of Educational Research*, XXIII (March, 1931), 210-231.

the various processes to children at too young an age.¹ Considerable stress and strain on the mental health of our school children would be avoided if most arithmetic material was placed at least a full grade level above its traditional grade level. Some processes are badly misplaced and should be moved up two or three full years. For instance, the Northern Illinois Committee found that long division could be most profitably learned in the seventh grade¹ instead of in its traditional place, the fourth or fifth grade.

Superintendent L. P. Benezet of Manchester, New Hampshire, carried on an experiment with the pupils in his schools after which he went so far as to say that pupils can learn in two years all the arithmetic now taught if it were postponed until the seventh and eighth grades.² He points out clearly the fallacy of attempting to teach certain arithmetic processes to pupils before they are mentally mature enough to comprehend them.

Another criticism of the traditional method is that the class method of conducting the work makes little or no provision for individual differences in arithmetic ability. All pupils in a given grade are expected to work at the same rate and leap each hurdle together. The slow ones are prodded on and the fast ones are held back. Those who cannot keep up in spite of the prodding are often ignored until the end of the term, at which time they are branded as failures and made to repeat. Such a process tends to undermine the general confidence of the pupil and give him an inferiority complex which may handicap him throughout life.

The third criticism of traditional practices in arithmetic is that the method of teaching the processes does not of itself develop meanings and does not lead to an understanding of arithmetic as a quantitative system. The new state course of study for the State of Virginia has become somewhat of a model throughout the country in so far as a progressive integrated course of study is concerned. The mathematics subcommittee of the Virginia Course of Study committee makes the following statement concerning the proper function of mathematics:

The position taken in this course of study with respect to the function of mathematics is that both elementary and secondary mathematics are taught in the school as a means of providing continuous growth in the powers of understanding and analyzing relations of quantity and of space which are necessary to an insight into and control over our environment and to an appreciation of the progress of civilization in its various aspects and to develop

¹ Carleton W. Washburne. "The Grade Placement of Arithmetic Topics: A Committee of Seven Investigation," *Report of the Society's Committee on Arithmetic*. Twenty-ninth Yearbook of the National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Company, 1930, pp. 641-670.

² L. P. Benezet, "The Story of an Experiment," *National Education Journal*, XXIV, XXV (November and December, 1935, and January, 1936), 241-244; 301-303; 7-8.

those habits of thought and action which will make these powers effective in the life of the individual.¹

The traditional type of isolated drill is ineffective in accomplishing such progressive aims.

WHAT CAN BE DONE TO IMPROVE THE SITUATION?

The first step in remedying the traditional set-up is to change the grade placement of the processes and make such placement correspond more nearly with pupils ability to learn. The fact that the placement in practically all arithmetic textbooks is improper is somewhat of a handicap but not an unsurmountable one. As soon as textbook companies find there is a definite demand for a revision they will undoubtedly modify their books to meet the demand. In the meantime, schools may meet the situation by assigning books to higher grade levels than the ones indicated by the authors.

Individualizing the necessary drill work is the second step needed to improve the present method of teaching arithmetic. Children do not learn at the same rate. Some pupils are obviously able to progress more rapidly than others, making the class plan of instruction objectionable. To meet this situation it is advisable to allow each child to progress at his own rate. However, the teacher who is carrying on an activity program will have a minimum of time to spend drilling individual pupils, and so it is advisable to have this work well organized in individual, self-instructive assignment booklets similar to those used in Winnetka² and in Sacramento.³ These will serve to individualize the drill material and at the same time free the teacher for more important work.

The third step in remedying the traditional set-up is to change the usual method of teaching arithmetic. Instead of teaching arithmetic as an isolated separate subject, it should be taught through rich and varied activities which are meaningful to pupils. The situations which children have, both in and out of school, afford opportunities for increasing the meanings of number, for using skills already learned and for learning new processes. Units of work developed around child centers of interest furnish the best means of developing the meaning of number, and of acquiring a knowledge of the social values of the subject. For example, a social studies unit involving a trip to the city, a trip around the state, or a trip around the world offers abundant opportunity for the functional use of arithmetic. Costs, distances, and time are elements to be dealt

¹ *Tentative Course of Study for the Core Curriculum of Virginia Elementary Schools, Grades I-VII*, State Board of Education, 1934, p. 399.

² Carleton Washburne, and Marion Carswell, *Washburne Individual Arithmetic Series*. Yonkers-on-Hudson, New York: World Book Co., 1929.

³ Ray B. Dean; F. E. Brolliar; Minnie Roth; and Others, *Pupil's Individual Arithmetic Series*. Sacramento: Sacramento City Schools, 1935, 1936.

with on any trip. The comparative costs of traveling by various ways, budgeting of the money allowed for the trip, keeping expense accounts, allotting of time for stop-overs, and apportioning time for sightseeing are a few possibilities. Almost every unit of work offers some opportunity for using arithmetic in a functional way.

The traditional idea that arithmetic consists only of isolated computational processes is largely due to the fact that surveys of adult needs in arithmetic have considered only the arithmetic processes and have ignored the total social setting in which adults use these processes. Adults, other than teachers, seldom, if ever, use arithmetical processes except as a part of some center of adult interest or need. In adult life arithmetic is functional but in elementary school life arithmetic has had practically no functional value. The plea, here, is to teach arithmetic to children in lifelike situations in order that they may learn its functional value. The separate processes are learned more easily, retained longer, and applied better when taught in connection with meaningful situations on the child's own level than when taught as isolated elements arranged in logical order by adults.

Does this mean that all drill work in arithmetic should be eliminated, and that incidental learning through children's activities is sufficient? There are some extremists who hold this point of view, but such a course is not advocated here. In adult life the efficient individual who finds the need for additional knowledge in order to carry on his activities takes time out to master the processes needed. In the same manner, as children find the need for particular processes in their activities, time should be taken out to master those processes. In this method the functional value of the process is primary while the acquiring of skill in the process is secondary and subordinate. In the traditional method the acquiring of skill in the process is primary and the functional value of the process is seldom, if ever, considered. Incidental learning of arithmetic processes through meaningful activities, backed up by drill when needed, seems to be the proper course.

In summary, the following steps seem advisable in order to improve our practices in the teaching of arithmetic:

First, rearrange the grade placement of processes, advancing practically all processes to a higher grade level as indicated by the best scientific research.

Second, individualize the necessary drill work in order that each child may progress at his own rate.

Third, teach arithmetic largely through activities and lifelike situations which are meaningful to children and thereby make arithmetic functional in the lives of the children.

SHOULD BEGINNING READING INSTRUCTION BE POSTPONED?

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University of Southern California*

Traditionally, the chief function of the first grade has been the teaching of reading. Courses of study call for minimum reading attainment; principals have a tendency to judge first grade teachers by the reading success of their children; instructors are extremely concerned when their classes do not measure up to standard on a reading achievement test. If a child fails to make the required progress, no one is more upset than the interested parents. They bring pressure to bear upon the teacher and the principal, sometimes doubting their efficiency and the methods which have been used. But seldom, if ever, do parents question the wisdom of school authorities for introducing their child to formal reading at six years of age.

Yet what evidence do we have that six years is the best age for children to begin mastering the intricate and difficult process of reading? Practically none. While the problem is complicated, and experimental data partially lacking, chronological age does not appear to be the major factor in determining reading readiness. Instead, specialists in this field believe readiness is the maturation of all the mental, physical, and emotional factors involved in the reading process. It is important to note that the maturation of these traits may not coincide with a chronological age of six years. In fact, many normal children may not reach this stage before six and one-half or seven years. Other children may not arrive before they are eight years old chronologically. Let us examine more critically some of the maturity factors in relation to chronological age.

MENTAL MATURITY

Mental maturity long has been recognized as an important index of reading readiness. Those who teach children to read have found that the possibility of success is decidedly decreased unless the pupils have reached a certain mental age. While there is not exact agreement, many specialists believe this minimum age to be approximately seventy-six to seventy-eight months. If the child's mental age is much below this point, he will not learn to read with any degree of facility regardless of the excellence of the methods used or the conscientiousness and patience of the teacher. The time and effort

involved in teaching this pupil will be entirely out of proportion with the results achieved.

Numerous scientific studies support this contention. For example, let us cite the study made at Winnetka, Illinois, by Morphett and Washburne. As a result of their experimentation these writers concluded that:

1. Correlations between mental age and ability to read are fairly high.
2. Children with a mental age of six years and six months, as measured by both the Detroit First Grade Intelligence Test and the Stanford Revision of the Binet-Simon Scale, made much better progress in reading than those with less maturity.
3. Teachers can decrease greatly the chances of failure by postponing the teaching of reading until children reach a mental age of six and a half.¹

Morphett and Washburne report that the results of their study were so striking that they checked the experiment by repeating it in 1929-30. Although different teachers, different children, and different tests were used in the second instance, the results confirmed the earlier experiment in all its basic conclusions.

If we accept a minimum mental age of the seventy-six to seventy-eight months as essential to reading experience, the following question occurs. Do all normal average children who are allowed by California state law to enter the first grade have this minimum mental age? The answer definitely is "No." Most children enter the first grade at about six years. Actually they may arrive at five years nine months in a system which has a mid-year promotion and as early as five years six months in the school which has no mid-year promotion. Assuming that these children are average, with a 100 IQ, let us see what their mental ages will be. The six year old will have a mental age of seventy-two months, the five year nine months child, a mental age of sixty-nine months, and the five year six months child, a mental age of sixty-six months. Suppose these children have IQ's of 90, which is still average. Then mental ages would be 64.8, 62.1 and 59.1 months respectively. In the case of the last child, who has a chronological age of five years six months and 90 IQ, it will be a year and a half to two years before he will attain a mental age of seventy-six to seventy-eight months and can be introduced to reading with any assurance of success.

So far we have discussed the problem from a theoretical standpoint. Let us see what happens to average children in a specific

¹ Mabel Vogel Morphett, and Carleton Washburne, "When Should Children Begin to Read?" *Elementary School Journal*, XXXI (March, 1931), 496-503.

situation. In Los Angeles a child is expected to have a mental age of seventy-six months before receiving instruction in reading. If we assume that the average child enters school at six years of age, and actual figures show that a negligible number come later, he must have an IQ of 105.6 in order to begin reading. The distribution of actual intelligence quotients over the whole grade range in Los Angeles indicates that 61.7 per cent of the children are below 105.6 IQ. Consequently, approximately 60 per cent of the children who are chronologically old enough to enter the regular first grade are placed, instead, in a transition group. Examination of the records of the 13,192 Los Angeles children chronologically ready for first grade in February 1936 confirm these conclusions.

With so many pupils reaching the first grade via transition classes, it is obvious that many average children are not allowed to go into the regular first grade without this experience. An article by Dr. Elizabeth L. Woods and Staff, which will appear soon in the *Journal of Educational Research*, presents case studies of average Los Angeles children who were placed in transition groups. What are we to conclude? Probably that the present first grade curriculum with its reading requirements is not adapted to the mental maturity of many first grade children. If it is to be geared even to the average pupils, it must be changed. Evidently, formal reading with its required word lists and systematic drill is not a profitable experience for most six year old children.

PHYSICAL MATURITY

While reading is primarily an intellectual process, certain physical abilities are necessary if it is to be carried out in the normal way. Visual characteristics are among the attributes associated with reading disability. During the early years of the child's life, wonderful changes take place in his ability to perceive objects clearly and to focus both eyes exactly upon one object.

A mass of scientific data indicates that six and seven year old children may vary greatly in their ability to perceive likenesses and differences in word forms. It is definitely known that some children cannot learn to read at six years because the eye muscles have not adjusted themselves sufficiently to allow correct focus. In many of these cases time, with its resulting maturity, is the only correction needed.

Investigators in this field believe that the close sustained attention required in reading may prove injurious to the eyes of some six year old children. It is suggested that reading may delay satisfactory muscular adjustment, and in a few cases fix the disability permanently.

Evidence on this point is not entirely conclusive. Nevertheless, investigations indicate a possibility of injury, particularly in the case of the child with a tendency toward far-sightedness.

If there is the slightest possibility of injuring the eyes in too early reading, how can we afford to take the chance? It seems unjustifiable when we consider that postponement of instruction will not result in any permanent loss of reading skill. The experiments of Lula Wright at Lincoln School, Teachers College, Columbia University, indicate that children who are introduced to reading one to two years later will read as well as other children by the time they reach the fourth grade.¹ Postponement of reading plus a program designed to build a larger fund of meanings and a better vocabulary, may result eventually in greater reading skill.

OTHER Maturity FACTORS

There are other important factors besides mental and physical maturity which vitally affect reading readiness. Such traits as emotional stability, a wide background of experience, good vocabulary, and desire to read play an important part. There are fewer scientific studies indicating the necessary development in these areas than in the mental and physical fields. However, we do know that less than one-half of the typical first grade children have sufficient coordination of all factors—mental, physical, emotional, and experiential—to insure success in learning to read. The rest may be drilled, coached, and coerced; but still they cannot attain the standards set for reading in many of the first grade courses of study.

A PROPOSED SOLUTION

There are three possible ways of handling the primary reading situation. First, we may accept the *laissez faire* course which has been generally pursued throughout the country at large,—that is, introduce children to reading when they enter the first grade at about six years of age regardless of their mental, physical, and emotional maturity. This practice brings inevitable failure to an appalling number of children. From the stigma of failure with its concommitants—a sense of inadequacy, a dislike of reading, a hatred of school, and a feeling of social insecurity—many average children never escape throughout their entire school career. Failure and its resulting attitudes we have come to condemn as poor mental hygiene.

Second, we may organize transition classes similar to those found in many of the larger school systems. This procedure prevents failure

¹Lula E. Wright, *A First Grade at Work; A Non-Reading Curriculum*. New York: Bureau of Publications, Teachers College, Columbia University, 1932.

in first grade reading by holding children in a "sub-first" grade class until they are ready to read. However, it does not obscure the fact that the first grade curriculum is adjusted poorly to the abilities of first grade children. Automatically, it adds six months or a year to the period many average children must remain in the elementary school.

The third answer to this problem is to revise the reading requirements for the primary grades, postponing the introduction of formal reading and emphasizing experiences which will develop greater reading readiness. This course will be difficult because of present custom and tradition, but it is the only real solution of an impossible situation. The reading curriculum must take into account the basic factors in child growth and development.

One of the vital necessities in a changed reading curriculum is an understanding in the home. Naturally, intelligent parents will be concerned over a marked deviation from the traditional reading course. They must understand the reasons for the change. Certainly it should be no more difficult to interpret to parents a reading program based upon children's ability than to explain why average children failed in first grade reading or why average children were placed in transition classes. As a group, parents are anxious to cooperate with the school and to do whatever is best for their children. Working together, the school and the home should be able to develop a reading curriculum which will be adjusted to the maturity, the interests, and the needs of children.

CREATIVE WRITING AS SOCIAL EXPERIENCE

HOLLAND D. ROBERTS, *Acting Assistant Professor of Education,
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Creative writing is finding a vital place in the modern school curriculum. In the majority of the leading schools of the United States it now has an important place. In a number of these schools it is serving the broad purposes of building mental and physical health for the child and is taking its place in realizing our democratic heritage. The earlier Victorian aim of producing beautiful useless verses and description, shallow or empty in content, is still characteristic of some school programs but the trend is now toward writing that serves the urgent needs of our developing democratic society and the child—socially conceived—through whom the improvement of our school, community, nation, and world must be brought about.

To take this functional view of creative experience and of creative writing within the framework of unified living is not to deny the truth of Keats' line

A thing of beauty is a joy forever,
 . . . ; it will never
Pass into nothingness.

But it does mean that we interpret beauty as an expression and satisfaction of human needs and desires in the work of making the world a better place for human life.

CREATIVE WRITING SPRINGS FROM VITAL EXPERIENCES

"Art for art's sake" was scorned by pioneer America and that standardized formula of the mauve decade is finding few supporters among young Americans and their teachers in the modern school. Creative writing today springs out of the vital experiences of the children. If they are encouraged they will think and write creatively and vitally about their play, the activities which interest them in their school lives, their work, and include telling biographical and descriptive notes on their families and friends. Under interested teachers they make their own stories, poems, and plays as simply and as naturally as they run or play games in the school yard. We know they can do this without special talent because we have the record of their work in classrooms in every section of the United States. A few cases in point are given below.

Norse mythology had absorbed Myron Alexander in the fifth grade of the Parker Practice School in Chicago, and he wrote out of the synthesis of his reading and many experiences watching rolling midwestern summer storms:

THUNDER STORM

I saw a man leaping in the sky
 Against the sunlight;
 I saw him hammering on a cloud rock,
 Far up in the sky;
 Very soon the sky turned gray,
 The great, great drops of rain came,
 Flashes of lightning sparkled,
 Crash went the hammer of Thor.

Sweeping imagery, vivid feeling, and exact reporting combine to lend this poem distinction.

In Clay County, South Dakota, an eleven year old watched the steam shovel at work and wrote:

STEAM SHOVEL

The big old steam shovel,
 That's digging in the road,
 Can bite up as much
 As a whole wagon load.

It scoops up the dirt
 And rocks on the hill,
 And dumps them all over
 The side of the hill.

It stretches its neck
 For a big bite of clay,
 And grumbles and groans
 As it's turning away.

The engineer driver knows
 Just when to stop,
 And jerks on the chain,
 So the mouthful will drop.¹

Hours of careful interest and observation are in this poem and the originality and accuracy characteristic of the unspoiled speech of all children. This country boy saw some of the beauty and meaning of the steam shovel in modern civilization and he wrote what he saw so clearly that no one can fail to understand. It is true it is not in inspired form, and the rhythm the author has chosen is as jerky as the motion of the steam shovel he was watching, but the work is original and honest. There is no imitative echoing in empty rhyme

¹ *The Voice of the Young Citizens League*. Compiled by Emma Meistrik. Sioux Falls, South Dakota: Broun and Saenger, 1935.

of fairies, fleecy clouds in the sky, or rainbows. It is the province of the teacher and his fellows to help him see more deeply and to find more effective form.

ORAL AND WRITTEN EXPRESSION AN INTEGRAL PART OF CURRICULUM UNITS

The mystery and romance of industry and commerce can provide the frame work within which new meanings can be discovered or created by our children. Plays, stories, articles, and poems need not be isolated fragments of experience but rather an integral part of curriculum units in transportation, communication, or industrial processes. They can as readily grow out of a study of the home or family life. One five year old who was sun bathing under an arc lamp chanted to her father:

Sun lamp, sun lamp—
How do you shine?
You are shining with sparks
That make us good and strong!

To her, health did not mean a dreary didacticism to be memorized but exultant creation of mind and body together—a song which a creative school might have set to music and sung, or used as the stimulus for the poster art in which children delight.

Exact observation, clear fancy, and originality in communication can develop early. Kindergarten children spoke these lines to their teacher:

AEROPLANES

Aeroplanes are autos in the air,
Clouds are the white roads everywhere.

TAXIS

Taxis, taxis, coming down the street,
Just like little yellow ants crawling on wheel-feet.

STIMULATION OF INDIVIDUAL ABILITY

Frequently in the past, as Hughes Mearns has noted, "Parents and teachers alike combined to rout out latent expression of individual ability." It is the role of the creative teacher to discover and stimulate originality, even if at first the child's efforts are jarring and upsetting to conventional ideas of the pretty.

There is imaginative lift in these lines written by fourth grade children at the Montecito Union school:

I saw a cloud like a Zeppelin, zooming over the sky.

And a clear, rhythmic note in this brief, glancing bit of autobiography:

The wind whistling through the trees
Sounds like a song I know.

There is lively active expression in the work of nine year old Bobby Neustadt from the same school:

THINGS I LIKE TO DO

I like to run with my doggy,
Or buy an ice-cream cone,
Or play all day beside the creek
Or just to be alone.

The last line makes a beginning which a teacher artist will use to help the boy recreate himself as he writes. Thirteen year old Loren Bacon of Spink County, South Dakota, has written as exactly, but he has quite a different story to tell of his daily round, and the verse as a whole is an intimate sketch of the life of the boy:

MY WORK

Each morning whether rain or shine,
There is some work that Dad calls mine;
It's milk two cows and feed them too,
And then I'm scarcely half way through.

The separator I must turn,
Feed the calf—bring coal to burn;
A bite for breakfast, not time for more,
Where's my cap? School van at the door.¹

When Oliver Goldsmith wrote,

Ill fares the land to hastening ills a prey,
Where wealth accumulates and men decay,

his own struggles against poverty and the debtor's prison gave edge to his pen. He would have looked with sympathetic eye upon another boy's description of life in Beadle County, South Dakota, at the depth of the depression:

TROUBLES GALORE

My Tuesdays are meatless,
My Wednesdays are wheatless,
I am eating less each day.
My home is heatless,
My bed is sheetless,
They're all sent to the camps.

¹ *Ibid*

The barrooms are treatless,
 My coffee is sweetless,
 Each day I get poorer and wiser,
 My stockings are feetless,
 My trousers are seatless,
 Oh! My, but I do hate relief.¹

—LLOYD HOWARD

Lloyd's homely lines speak for millions of Americans. To help such boys find a voice and gain recognition among their fellows is a valuable first step in the solution of our greatest contemporary world problems. Such creative writing gives teaching social vision and articulates the school with significant human living.

CREATIVE WRITING AT ANY GRADE LEVEL

Beginnings in creative writing may be made at any level and when the work of the school has ceased to be formal training and becomes vital living, children will often wish to start in the kindergarten or first grade with some important classroom activity. *Our Book* by the boys and girls of the Oakland elementary schools (1928-1931) includes an offering of this type from the high first and the low second grade of the Horace Mann school.

OUR CITY

We're building a city
 With houses blue and brown,
 We hope when you see it
 You'll like our town.
 We have three steam shovels,
 And we have a city hall,
 And five telephone poles
 That are very tall.
 We have a bank and stores,
 And street cars, too.
 Come in our room
 And we'll show it to you.

THOUGHT NOT SUBORDINATED TO RHYME

Meaning and interest are touched with the fine, free cordiality of children. Here the thought has not been subordinated to the rhyme as is too frequently the case. Irregular rhyme such as this and the unrhymed rhythms of some of the lines above are the natural poetry common to unfettered human beings everywhere. Teaching has too frequently led both teachers and pupils to believe that poetry must rhyme, and rhyme it often does with complete sacrifice of the thought and feeling which the child may have had at the beginning.

¹Ibid.

The great poetry of the Bible does not rhyme nor Shakespeare's finest lines, nor Whitman's. Why should we insist on it for our children? Poetry is thought and feeling communicated with the music of words. Except when the rhyme comes naturally without strain, thought, or effort, we are nearly always better off without it. We can help children by telling them this and encouraging their successful unrhymed efforts.

Probably too much attention has been centered on the writing of poetry or verse. Many successful teachers begin without emphasis upon form and encourage vigorous, untrammeled imaginative writing of all kinds. Stories and plays come naturally to all children. If we let them know what we expect of them and if we expect from them normal healthy creative development in stories of their daily lives we will not be disappointed. Mary Evans of Montecito Union school writes in the introduction to a recent delightful anthology of verse:

All of the children have an inborn ability to express their real thoughts if they are allowed to use it. To develop and refine the creative thinking of these children is one of the joys of our profession. . . . When the children once understood that creative writing means expressing thoughts so that others may share and enjoy them the results were surprising.

Each year the elementary school children of Sunset school, Carmel, write, edit, and illustrate an issue of the local weekly, *The Pine Cone*. Visitors consider the achievement unusual. What is remarkable is our neglect of the creative power in our children elsewhere.

CREATIVE LITERATURE DEVELOPS NATURALLY

The work of the gifted child poet, Nathalia Crane, author of "The Janitor's Boy," and Hilda Conkling proved many years ago that children do not need to copy—to imitate. With our encouragement they will develop naturally in the direction of creative literature. If we can give our children the proper setting—produce the proper intellectual climate—we may learn how to help all of them reach the imaginative level of six year old Hilda Conkling when she said to her mother:

WATER

The world turns softly
Not to spill its lakes and rivers
The water is held in its arms
And the sky is held in the water,
What is water
That pours silver
And can hold the sky?¹

¹ Hilda Conkling, *Poems by a Little Girl*. New York: Frederick A. Stokes Company, 1920.

EXPRESSION ESSENTIAL TO MENTAL AND PHYSICAL HEALTH

We know that what human life may be depends upon the originating or creative capacities of man. Creative writing is a part of the creative living through which life is reshaped and its content reconstructed. To realize this principle means that the creative writing they do should primarily help children increase their mental and physical health. It means organizing the school to make effective the Children's Charter proclaimed by President Hoover's White House Conference on child health and protection.¹ Articles XV and VI and VII of that charter are fundamental pillars of the creative school.

ARTICLE XV

For every child the right to grow up in a family with an adequate standard of living and the security of a stable income as the surest safeguard against such handicaps.

ARTICLE VI

For every child from birth through adolescence promise of health including health instruction and a health program, wholesome physical and mental regulations with teachers and leaders adequately trained.

ARTICLE VII

For every child a dwelling place safe, sanitary and wholesome with reasonable provisions for privacy, free from conditions which tend to thwart his development, and a home environment harmonious and enriching.

In our schools today increasing numbers of pupils and teachers are realizing the essential unity of healthy individual and social life and creative activity. Where this is true there is no tendency to write escape literature of elves and fays. Rather, the pupil expresses his whole personality in stories, poems, articles, and plays, based on his actual day by day real and imaginative experiences. In the work of such children we have evidence that all life, but in particular youth, has undiscovered gifts. Their unknown talents are all about us in those we meet in our daily round. To find and develop them in creative writing as in other fields is a new dynamic in education.

¹ *White House Conference on Child Health and Protection*. New York: The Century Company, 1931. Copies of the Children's Charter for wall use may be secured from D. Appleton-Century Company, New York, for 15 cents each.

REDIRECTING THE ELEMENTARY CURRICULUM IN FRESNO

I. O. ADDICOTT, *Director of Curriculum,
Fresno Public Schools*

Convinced that the curricular offerings of the Fresno Public Schools, particularly at the elementary level, were in need of coordination and articulation, the Fresno Board of Education during the school year 1935-36 established a Department of Curriculum. Two planning groups were created, a Curriculum Council representing all levels and services in the system, and a Coordinating Committee which represented various fields of instruction. It is with the work of this second group especially and its principal contribution, a Scope and Sequence Chart for Elementary Schools, that this article is concerned.

Both planning groups recognized that the problem of curriculum development has two distinct phases:

1. *Building toward the ideal curriculum.* This is a long term program involving (a) clarification of the major elements in a philosophy of democratic living, (b) a growing knowledge and appreciation of the significant characteristics and needs of modern life, (c) a carefully formulated and convincing philosophy of education, (d) a program of experimentation and (3) absorption of the results of research into practice.

2. *Constant revision of existing materials to approximate the above ideal.* These revisions should be put into effect as rapidly as the teaching staff and the public can be led to see that proposed changes will actively lead in the direction of true progress and improvement.

RECOGNIZED TRENDS

We are convinced that changing knowledge of how children best learn to satisfy their needs and the rapidly changing needs of society are the reasons why adjustments are constantly necessary in curricular offerings. Certain trends are recognized by our committees as they study recent attempts to project programs which approximate the needs of changing conditions. Some of these apparent trends are as follows:

1. *Increased recognition of the importance of "maturation" in learning, and a tendency to determine the placement and sequence of learnings in terms of appropriate "maturity levels" of children.* The attempt to force learnings by means of drill before appropriate maturity has been reached results in disorganized, fragmentary, and poorly retained learnings.

2. *Increased recognition of "pupil purposes" in the learning process.* The purposes or needs of the learner determine the extent and direction of learning activities. Drill and repetition for which the learner feels no need will effect learnings, but at the expense of insight regarding the meaning of the thing learned and permanence of learning.

3. *An integrated unit type of curriculum achieved through pupil activity.* This implies the organization of educational experiences as far as possible in terms of pupil purposes, with opportunity to use tool subjects and information in meaningful situations. Essential skills and information which cannot be acquired as a part of unit instruction are acquired by extrinsic drill. Activity is the method used, because children learn actively. The term should connote pupil activity as contrasted with teacher activity, and should be conceived as an orderly process in which physical activity does not dominate mental activity.

4. *The development of a Scope and Sequence with social studies as the core, around which the related fields of the curriculum are centered.* In this connection social studies should be defined as those studies which help to improve human relations—"the studies that help children to understand and get along with people."

5. *Courses of study which provide a wide variety of materials and approaches to be used, allowing relatively great freedom as to method employed so long as desirable results are attained.* The proper starting point for curriculum development and supervision is an informed teacher, afforded ample materials and help, with a vision of what she can do through her classroom work to improve human relations.

6. *A shifting of emphasis in education from the mastery of tool subjects to the development of personality as the important purpose of all schooling.* It is being increasingly recognized that high and worthy purposes and adequate self controls are the chief end of education, and that techniques and knowledges are not ends in themselves, but only the means whereby such purposes can be made effective. It is further being recognized that the school is only one experience among many which form character, and that cooperation with all agencies touching the life of the child is essential if desired results are to be attained.

In attempting to work out a possible integrated program, our Coordinating Committee as a first step attacked the problem of building a Scope and Sequence of Major Learnings using social studies as the core of the curriculum. The definition of Scope and Sequence accepted by the committee is "a charted representation of the breadth and direction of proposed learning experiences."

REASONS FOR INDICATING BREADTH AND DIRECTION OF PROPOSED LEARNING EXPERIENCES

The building of a Scope and Sequence was considered to be important for several reasons:

1. *It provides depth and breadth of meaning and experience.* Teachers are prone to ride hobbies in their instruction, particularly in those phases of an activity which are relatively familiar or easy to teach. The overstressing of certain items to the exclusion of others which are just as vital is discouraged.
2. *It provides for continuity of educational experiences by stimulating consecutive, cumulative movement through the curriculum.*
3. *It allows freedom, within extremely broad limitations, for a teacher to organize a program in terms of the needs and purposes of pupils.*
4. *It helps to orient pupils in the social life of which they are a part.*
5. *It provides a core around which to weave pertinent subject materials.*
6. *It provides for the guided growth and development of children in harmony with generally accepted aims of education.*

Various possible approaches used by many other systems in determining the scope of instruction were rather exhaustively studied. A modified form of the social functions approach used in Virginia¹ was finally adopted because it was considered to be the most inclusive.

The sequence used for the Fresno Scope and Sequence is a modified form of that developed by Dr. Paul R. Hanna of Stanford University and is also similar to one worked out at the University of California at Los Angeles by Miss Corinne Seeds. It provides for continuity of instruction and is organized not only in terms of what is ideal, but also with reference to teaching aids available at present.

Fresno's Scope and Sequence is provided on two forms, both of which teachers have found to be helpful:

Form A. Aspects of centers of interest indicated by grades.

Form B. Suggested units of instruction listed under the center of interest for each grade.

TEACHERS PROVIDED WITH UNITS

In addition to this Scope and Sequence, teachers are provided with rather complete type units which include:

1. A brief statement of the concept or concepts to be developed.
2. Possible approaches listed in brief sentence form.
3. Possible activities (things to do), one or more of which may be used by a teacher in securing the outcomes it is hoped may be the result of work on the unit.

¹ Tentative Course of Study for Virginia Elementary Schools. Grades I-VII. Bulletin of State Board of Education, Vol. 17, No. 1, July, 1934.

4. Teaching aids, including (a) references to be used by teachers, (b) references to be used by pupils, (c) visual aids, (d) songs, (e) records, (f) rhythms, and (g) trips and excursions.

The development of this Scope and Sequence is one step forward in terms of the ideal which Fresno holds for its children, namely, to build in boys and girls a vision of what life in a democracy is and may become, a purpose to achieve this vision for themselves and their fellow men, and the tools and knowledges necessary to make their purpose effective.

**FORM A. TENTATIVE SOCIAL STUDIES SCOPE AND SEQUENCE¹ FOR
FRESNO ELEMENTARY SCHOOLS**

(Proposed for Use as the Core of the Curriculum)

THE CHILD AND HIS IMMEDIATE ENVIRONMENT

Social Functions	Living at Home and School First Grade	Living in the Community Second Grade
PRODUCTION AND DISTRIBUTION	How and where do we get the things we use at home and at school?	What goods and services does our community produce? What do we do with the surplus?
CONSUMPTION	What does the family consume? What does the school consume?	How do we use the goods and services provided by our community?
CONSERVATION AND PROTECTION	How can we protect and conserve life, health, and property at home and at school?	How does our community protect and conserve life, health, property, and natural resources?
TRANSPORTATION AND COMMUNICATION	How do members of our family travel?	What means of communication and transportation does our community use?
RECREATION	How may we have an enjoyable time at home and at school? How does our community provide for recreation?	
ESTHETIC EXPRESSION	What may we do to make our homes and schools more beautiful and pleasant?	What may we do to make our community a more attractive and pleasant place in which to live?
EDUCATION	How do our parents educate us? Why do we go to school?	Why does our community provide schools?
RELIGIOUS EXPRESSION		
EXTENSION OF FREEDOM, PARTICULARLY THROUGH SELF CONTROL AND SOCIAL CONTROL	Why do we have rules in play? Why do we have rules at home and at school?	Why do we have rules in play? What are the rules of our community? Why are they necessary?

¹ In teaching a given unit (e.g., transportation) it would be difficult, and perhaps unwise at the first grade level, to entirely limit that social function to its effect upon the home. Transportation in the community would naturally be touched upon. Therefore, the line between first and second grade units is purposely left a dotted one.

LIVING BY ADJUSTING TO ENVIRONMENT

Social Functions	In Primitive Communities Third Grade	In Adaptation to Varying Physical Environment Fourth Grade
PRODUCTION AND DISTRIBUTION	How did the things primitive people produced differ from our products? How do they differ today? Do they use different ways of producing and distributing than we do?	How is production and distribution altered materially by differing environments, such as hot lands, low lands, cold lands, and mountains?
CONSUMPTION	How do and did goods and services consumed by primitive people differ from those we consume?	How do differing environments lead to different types of things consumed? What do we consume from these areas?
CONSERVATION AND PROTECTION	How do and did primitive peoples protect and conserve their lives, property, and natural resources?	How do people who live in environments very different from ours, protect themselves and conserve their resources?
TRANSPORTA- TION AND COMMUNICA- TION	How do and did means of transportation and communication used by primitive peoples differ from those used by us?	How are communication and transportation altered by differing environments?
RECREATION	How do and did primitives provide for recreation?	How is recreation affected by differing environments?
ESTHETIC EXPRESSION	How do and did primitive peoples express themselves through art, music, etc.?	How is peoples expression of that which seems beautiful to them affected by differing environments?
EDUCATION	How do and did primitive peoples provide education?	How does education have to vary because of differing environments?
RELIGIOUS EXPRESSION	How do and did people in primitive communities express their religious tendencies?	Do people in differing environments express their religious impulses differently?
EXTENSION OF FREEDOM, PARTICULARLY THROUGH SELF CONTROL AND SOCIAL CONTROL	What rules do primitive peoples make to help them live together? Why are they necessary?	

NOTE.—Anthropologists tell us that it is unwise to study primitives by comparing one social function (e.g., education) among several different cultures. They insist that one culture be studied at a time, going through all phases of social life.

In teaching life in varying physical environments, teachers may either compare one social function at a time, as affected by varying environments, or may study the effect of a given environment (e.g., the lowlands of Holland) upon all the social functions of life.

In teaching life in our city, county, state, and nation, teachers may either develop one social function to carry through from our local situation and out into widening horizons of state and nation, or the entire list of social functions may be covered, first in city and county, then in state and nation.

In teaching life in the world at large, the same approaches may be taken—either a comparison of a social function in several civilizations or a study of all social functions in one area of civilization at a time.

In all teaching the approach should be from the "here and now" to the "then and there." History should be taught as an explanation of things as they are.

LIVING BY INCREASINGLY CONTROLLING ENVIRONMENT

Social Functions	<i>In Our City, County, State, and Nation Grade Five</i>	<i>In the World at Large Grade Six</i>
PRODUCTION AND DISTRIBUTION	How does living in our day and age differ from living in pioneer times, because of changed means of production and distribution?	How do means of production and distribution differ in different parts of Europe, Asia, and the world at large? How have changed means of production and distribution altered life in these areas?
CONSUMPTION	What goods and services do we consume today? What goods and services were provided in pioneer times? How do they differ? Why?	What different things are consumed in different parts of the world? How is changed and changing consumption due to invention and machine production, changing life in modern Europe, Asia, and the world at large?
CONSERVATION AND PROTECTION	How do methods of conserving and protecting life, property, and natural resources in our day differ from those in pioneer times?	How do people in different parts of the world protect and conserve life and property? How have changed and changing means of protection and conservation affected the lives of people in modern Europe, Asia, and the world at large?
TRANSPORTATION AND COMMUNICATION	How did early means of transportation and communication differ from ours today? What effect have these changes produced?	How do means of transportation and communication differ in various areas of the world? How do means of transportation and communication make for world wide interdependence?
RECREATION	How do we spend our leisure? How did our forefathers spend their leisure? Why such differences?	How do other peoples spend their leisure?
ESTHETIC EXPRESSION	How do methods of expressing esthetic impulses today, differ from pioneer times?	How do other peoples express their esthetic impulses? Have social and economic changes affected some of these?
EDUCATION	How does education in our day differ from the education of our forefathers?	How do other people provide education? How have changed social conditions changed education throughout the world?
RELIGIOUS EXPRESSION	How did religious expression in pioneer days differ from religious expression today?	How do people in different countries express their religious impulses? Have discoveries and social change influenced religion, etc.
EXTENSION OF FREEDOM, PARTICULARLY THROUGH SELF CONTROL AND SOCIAL CONTROL	How do the rules and the amount of freedom under which we live differ from those of our forefathers? How may we gain in freedom?	How do the rules of living differ in various parts of the world? How have changed ways of living changed the rules of living?

FORM B. TENTATIVE SOCIAL STUDIES SCOPE AND SEQUENCE FOR FRESNO ELEMENTARY SCHOOLS

(Proposed for Use as the Core of the Curriculum)

Except when a unit covers only one social function teachers should use the list of social functions to check the breadth of instruction.

THE CHILD AND HIS IMMEDIATE ENVIRONMENT

<i>Social Functions</i>	<i>Living at Home and School Grade One</i>	<i>Living in the Community Grade Two</i>
PRODUCTION AND DISTRIBUTION	1. The play house 2. Pets and animals 3. The farm 4. Gardening 5. Toys and toymaking 6. Airplanes 7. Birds 8. Special days and seasons	1. The grocery and department store 2. The baker 3. Builders 4. Policemen 5. Firemen 6. Postmen 7. The library 8. Transportation 9. The dairy 10. How we get our food 11. Special days and seasons
CONSUMPTION		
CONSERVATION AND PROTECTION		
	<i>In Types of Communities Which Are Primitive or Simple Grade Three</i>	<i>In Varying Physical Environments Grade Four</i>
TRANSPORTATION AND COMMUNICATION	1. How Indians of the forest lived 2. How Indians of the plains lived 3. How Everglade Indians lived 4. How Indians of the desert live	1. How living in tropical regions differs from living in Fresno and other parts of the world. (Amazon Basin, African Congo, Philippine Islands)
RECREATION	5. How Indians of the sea coast live 6. How the Alaskan Eskimos live	2. How living in hot dry areas of the world differs from living in Fresno and other parts of the world. (Sahara Desert, Egypt, or California Desert)
ESTHETIC EXPRESSION	7. How the Copper Eskimos live 8. How the Eskimos of Greenland live	3. How life in cold lands differs from life in Fresno and in other parts of the world. (Antarctica, Greenland, Lapland, or Sweden)
EDUCATION	9. How the Arabian Bedouins live	4. How living in mountainous countries differs from our ways of living. (Switzerland)
RELIGIOUS EXPRESSION	10. How the people of China live 11. How the people of Japan live 12. How the people of Mexico live	5. How people live in low temperate areas of the world. (Holland, Belgium or Denmark)
EXTENSION OF FREEDOM, PARTICULARLY THROUGH SELF CONTROL AND SOCIAL CONTROL		6. How people live on the sea coast. (Norway, New England, Newfoundland, or Pacific Coast)
		7. How people live in semi-tropical lands. (Italy, Spain or Greece, Hawaiian Islands)

LIVING BY ADJUSTING TO INCREASINGLY COMPLEX ENVIRONMENT

<i>Social Functions</i>	<i>In Our City, County, State, Nation, and Continent Grade Five</i>	<i>In the World at Large Grade Six</i>
PRODUCTION AND DISTRIBUTION	1. Living in Fresno today and yesterday 2. Living in California today and yesterday 3. Living in the United States	1. Living in South America today and yesterday 2. Living in Africa today and yesterday
CONSUMPTION	a. How living today differs from living in pioneer times because of changed ways of producing and distributing things	3. Living in Asia today and yesterday
CONSERVATION AND PROTECTION	b. How goods and services consumed differ from those available in pioneer times c. How methods and needs for conserving and protecting life, property, and natural resources differ in our day from the needs and methods used in pioneer times	4. Living in Europe today and yesterday 5. Living in Australia today and yesterday
TRANSPORTATION AND COMMUNICATION	d. How early transportation and communication differed from means available today and the effects of these changes on the ways we live	6. Living in the Islands of the Pacific today and yesterday
RECREATION		
ESTHETIC EXPRESSION	e. How and why we spend our leisure in different ways than our forefathers did f. What America has contributed to the art and music of the world	
RELIGIOUS EXPRESSION	g. Schools of today and yesterday	
EXTENSION OF FREEDOM PARTICULARLY THROUGH SELF CONTROL AND SOCIAL CONTROL	h. How the desire for freedom (religious and political) has helped to make modern America 4. Living in Canada today and yesterday 5. Living in Alaska today and yesterday 6. Living in Mexico and Central America today and yesterday	

PLANNING EFFECTIVE ATTENDANCE SERVICE¹

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The trend of recent years and the definite potentialities of attendance service would indicate that it should hold a substantial place in the direction and improvement of instruction. If the supervisor of attendance will have sufficient vision and leadership he may be one of the most important members of the school staff in direction of the instructional program toward more appropriate social and individual goals.

UNIVERSAL FREE EDUCATION MORE IMPORTANT THAN COMPULSORY EDUCATION LAWS

Universal free education is a tremendously important concept and institution in American democratic life. Compulsory education laws and the means of their enforcement are but an incidental part of the larger program of an education for all the children of all the people in order that society may be preserved and advanced thereby.

Very little school attendance can be attributed to compulsory education laws. Legislation has followed widespread attendance rather than brought it about. From both an historical and a statistical point of view the adoption by the people of America of the concept of universal free education has been due to a deep seated desire on the part of society to benefit itself by development and protection. Generally, children have not attended school because of legal compulsion but rather because they and their parents have desired that attendance. The compulsory education law is the minimal expression of the basic American desire for universal free education and is relatively unimportant as a determiner of school attendance.

We should not minimize the important work of the attendance supervisor in bringing to the school the approximate five per cent of social laggards, who, if it were not for the attendance supervisor, would become greater sources of social contamination and degeneration. But if the job of the attendance supervisor were merely that of dragging the social laggard to the school it is quite certain that most of those engaged in attendance service would not be interested in it. The attendance supervisor is in reality the guardian and protector of democratic institutions through the medium of universal free education. Just as universal free education holds a very high place in social

¹ Address delivered at Conference on Direction and Improvement of Instruction and Child Welfare, Biltmore Hotel, Los Angeles, March 9-13, 1936.

planning in our democracy, so attendance supervision holds a high place in social planning. Attendance supervision, then, becomes primarily a social rather than a law enforcement project.

NEED FOR AN EFFECTIVE EDUCATIONAL PROGRAM FOR EVERY CHILD

The philosophy of universal free education involves not only getting the children to school, but, much deeper, the implication that when these children are brought to school a program which is individually and socially potent will be made available to them. It is more important to have an effective program for the child after he comes to school than it is to get him into school. The ultimate test of the effectiveness of an attendance supervision program should be more concerned with what happens to the child in school than in the mere fact of having brought him to school. In measuring effectiveness of the attendance program, it would be more appropriate to substitute effective school citizenship for percentage of attendance.

Recent educational literature has stressed the imperative need for more understanding of the individual child by the school so that he may be stimulated toward experiences which will be of maximum help to him as an individual; the need of understanding of the social and psychological self of the child; and the great need of understanding the society of which the child is a part. Who is in a better position to know these key items than the adequately trained supervisor of attendance?

THE ATTENDANCE SUPERVISOR IN A KEY POSITION

The attendance supervisor is in a key position in respect to the direction and improvement of instruction. He brings to the school and to the teacher the information concerning the child and the environment from which the child comes and to which he returns, so that his educational experiences may have real import.

From the point of view of interpreting the community and the child to the school, as well as from that of interpreting the educational program of the school to the community as an educational missionary, the attendance supervisor should be in very close touch with and assist in determining the educational program of the community.

Attendance service must be a type of clinical service. It should savor of the child guidance clinic, of broader guidance, health service, social histories, and more important than these, of insight and sympathetic attitude toward human problems and difficulties. The creden-

tial requirements for child welfare activities which emphasize courses, important as they may be are not all-sufficient. The deep and sympathetic human and social understanding which is so essential for the proper conduct of the really important phases of attendance supervision must be a part of the equipment of those engaging in such a service.

PROBLEMS INVOLVED IN EFFECTIVE SERVICE

How may these ideals be put into actual practice in an actual community by an actual supervisor of attendance? How may effective attendance service be planned? There is general agreement on a few matters, as follows:

1. There is great need for coordination of all child welfare activities within the community.
2. Unity of purpose throughout the whole state is essential. Community lines are drawn only for administrative convenience, while child welfare is state wide.
3. The professionalization of attendance service involves technical and broad skills and knowledges and thus constant need of professional improvement on the part of personnel.

But there is difference of opinion as to the formulas by which desired goals may be reached. Some of the questions in the minds of attendance supervisors striving to meet problems in their own communities are:

1. How may all child welfare activities (including relief) be coordinated within a community?
2. Should there be standard state wide forms, records, and reports? If so, what should they be? If not, in what fields should there be conformity and in what non-conformity?
3. What specific professional training should each attendance supervisor have in order to be adequately prepared for his position? How may continued professional growth be assured? How may the essential human values in attendance service be assured?
4. How far should the attendance supervisor go in family case work?
5. What registration and census procedures are most effective and essential?
6. What forms and techniques of transfer will be most effective?
7. Should there be competition between schools or systems in matters of attendance stimulation?

8. How may the bad social attitude of those coming to our state from certain sections of the nation be counteracted?
9. What specific adaptations may be made in a high school program so that it may meet the needs of those who attend because of compulsion?
10. How may community morale be developed toward better school attendance?
11. Is it desirable to have cooperation of parochial and private schools, and if so, how best may it be obtained?
12. When should attendance persuasion lead to the courts?
13. What research in matters of attendance may the attendance supervisor make which will be particularly helpful in his work?
14. How may one ascertain the real causes of attendance irregularities?
15. What is the effect of incidental absences, and what is the remedy?
16. What can be done concerning health problems among the children of migratory workers?
17. How may the professionally trained attendance supervisor gain recognition in the matter of helping build the educational program of the community?
18. How may one stimulate community desire for education, particularly among foreign and migratory groups, recognizing that social desire is much more potent than compulsion?
19. Can the attendance department as such be eliminated and a coordinated child welfare department be substituted to care for these and allied services and to keep constantly before administrators and teachers the child point of view?

NEEDED LEGAL REVISIONS

There are a few suggestions relative to the legal problems involved in an effective attendance program which are appropriate here.

1. A thorough review and modification should be made of all child labor laws. Some items which should be scrutinized are:
 - a. Better control of the "little merchant."
 - b. Change of hours of night employment so that no minor under eighteen may be employed before 6:00 a.m. nor after 7:00 or 8:00 p.m. California is one of the two most backward states of the nation in respect to legal sanction for night employment of minors.
 - c. Reduction of total hours of work and schooling of minors to less than forty-eight hours per week now permitted.

- d. More adequate control of employment of minors in seasonal agricultural occupations, and in home or farm labor.
- e. Recognition that limited work, under appropriate supervision as to time, location, and type, has value in the development of youth.
- f. Enforcement of child labor laws. Possibly a state educational agency set up for the enforcement of these regulations would prove advantageous.
2. The child labor, attendance, and continuation laws should be coordinated.
3. It should be recognized that poverty is a social responsibility rather than the responsibility of the child who happens to be born into poverty.
4. Laws of school support should be changed so that there is a premium for holding school more than 170 days, or at least so that districts holding school for more than 170 days may not be penalized.
5. Laws of school support should be changed so that a premium is not placed on closing school in case of light epidemics. These matters should be decided by other than financial issues.
6. Age limit for compulsory attendance may well be reduced from 8 to 6 years. Two-thirds of the states have more favorable laws than California in this respect.

SUMMARY

In terms of long range social planning the attendance supervisor is the protector of the social-democratic frontier, beyond which lie ignorance and social chaos. Bringing the child to school involves a great responsibility in having a program appropriately adjusted to the child in that school. Because of the professional attendance supervisor's intimate knowledge of the child and of the community, this official should be in a key position to assist in organizing an appropriate educational program for the child. With greater emphasis on an appropriately adjusted educational program, less emphasis need be placed on forcing children into school. Attendance supervisors with vision and leadership may be a strong force in bringing to California an education which is both child centered and life centered.

AN EFFECTIVE CHILD GUIDANCE CLINIC¹

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The title would lead one to assume that there might be such an organization as an *ineffective* child guidance clinic. Such books as *One Thousand Juvenile Delinquents—Their Treatment by Court and Clinic*,² *Fifty-Five Bad Boys*,³ or *The Psychopathic Personality*⁴ and the ever-increasing incidence of juvenile delinquencies and crime, certainly would lead one to such a conclusion. The subject, nevertheless, gives a positive touch and stimulus to this consideration, and while the shortcomings of any system are fully recognized, it is agreed that the child guidance clinic can be effective in ameliorating maladjustment of the school child to his total situation. It is not, however, the open sesame or the *summum bonum*, the cure all, the solution to all and every maladjustment.

THE CONTRIBUTIONS OF MEDICINE

A very limited introduction to the history of medicine through such books as *Mystery, Magic and Medicine*,⁵ *Devils, Drugs and Doctors*,⁶ *The Doctor in History*,⁷ *Microbe Hunters*,⁸ *Hunger Fighters*,⁹ *The Nature of the World and of Man*,¹⁰ *The Wisdom of the Body*,¹¹ *The Tides of Life*,¹² or *Man, The Unknown*,¹³ leads to the conclusion that here is the living example of integration. Here are recorded the contributions of a janitor who grinds lenses for a pastime; the chemists who open up the field of nutrition through the discovery of vitamins and hormones; the bacteriologists who find the invaders that wreck and play havoc with the human economy; the engineer who drains the swamps and disposes adequately of sewage and, presto, gone are the mosquitoes, malaria, and typhoid; a physicist, who discovers a ray and the bony structures and hollow viscera of the body are revealed; a school

¹ Address delivered at Conference on Direction and Improvement of Instruction and Child Welfare, Biltmore Hotel, Los Angeles, March 9-13, 1936.

² Sheldon Glueck, and Eleanor Glueck, *One Thousand Juvenile Delinquents, Their Treatment by Court and Clinic*. Cambridge, Massachusetts: Harvard University Press, 1934.

³ Samuel Hartwell, *Fifty-Five Bad Boys*. New York: Alfred A. Knopf, 1931.

⁴ Eugen Kahn, *The Psychopathic Personality*. New Haven, Connecticut: Yale University Press, 1931.

⁵ Howard Wilcox Haggard, *Mystery, Magic and Medicine*. Garden City, New York: Doubleday, Doran and Co., 1933.

⁶ Howard Wilcox Haggard, *Devils, Drugs and Doctors*. New York: Blue Ribbon Books, Inc., 1934.

⁷ Howard Wilcox Haggard, *The Doctor in History*. New Haven, Connecticut: Yale University Press, 1934.

⁸ Paul H. De Kruif, *Microbe Hunters*. New York: Harcourt Brace and Co., 1926.

⁹ Paul H. De Kruif, *Hunger Fighters*. New York: Harcourt Brace and Co., 1928.

¹⁰ *The Nature of the World and Man*. Edited by Horatio H. Newman. Garden City, New York: Garden City Publishing Co., 1933.

¹¹ Walter B. Cannon, *The Wisdom of the Body*. New York: W. W. Norton & Co., 1932.

¹² R. G. Hoskins, *The Tides of Life*. New York: W. W. Norton & Co., Inc., 1933.

¹³ Alexis Carrel, *Man, The Unknown*. New York: Harper and Brothers, 1935.

teacher who becomes ill, and through that illness, Dorothea Lynne Dix gives to the United States and the world, humane treatment for the insane. These contributions and others give society today that which is medicine.

If one would read historically, Mayer's, *The Seven Seals of Science*,¹ one would read "an account of the unfoldment of orderly knowledge and its influence on human affairs." Thus, astronomy, physics, chemistry, geology, biology, psychology, and the social sciences parade before the reader, being augmented, recrystallized, integrated, and synthesized into that which today is called education. Now a new tool, not necessarily a so-called learning tool, yet an instrument which integrates the knowledge of the human body, psychiatry, and psychology with social work is added to education. Through this instrument an attempt is made to understand the child as he is, to determine the hereditary and environmental forces at work in him, to appreciate his abilities or lack of abilities, to gain some knowledge of the purposefulness of his activities, and, then with his cooperation, integrate his personality into education.

MENTAL HYGIENE

Robert Maynard Hutchins in an address "Education and the Social Order," made the following statement:

Education is not a substitute for experience. It is preparation for it. There is no substitute for experience. The place to get experience is in life.

This idea is intriguing. One is reminded of the autobiography of a certain man. Early in his life he had an experience which upset his mental balance. He recovered, and as the result, society has benefited by *The Mind That Found Itself*,² and the National Committee for Mental Hygiene.

This experience of Clifford Beers into the highways and byways of mental disorder, gave him a new insight into the integrating functions of the body and mind and society. He realized that the causes of maladjustment of the individual with himself and with society, were often centered in that part of the personality called mind. Realizing this, he emphasized through the National Committee for Mental Hygiene, the importance of searching for the causes of maladjustment, delinquency, and crime.

In 1912, with the leadership of Dr. Thomas A. Salmon, the National Committee for Mental Hygiene took on a new branch of service. Whereas, heretofore, its chief interests and efforts were

¹ Joseph R. Mayer, *The Seven Seals of Science*. New York: The Century Company, 1927.

² Clifford W. Beers, *The Mind That Found Itself*. Garden City, New York: Doubleday Doran and Co., 1935.

directed toward the better care of the insane, and education of the public to a better understanding of the nature of mental disorders and the need for preventive measures, its new function now included surveys of the care and treatment of the mentally deficient, and studies in delinquency.

The attack upon these problems has been strengthened by the work of national leaders in the field of psychiatry. California has done its share in promoting the study of causes of delinquency. Since 1924, child guidance clinics have been a reality in this state, and today many school departments have some type of guidance program as a means of understanding and developing children.

THE FUNCTION OF THE CHILD GUIDANCE CLINIC

A child guidance clinic attempts to look at the child as a total individual. This looking at involves looking into the child's environment and heredity, his physical make-up and mental abilities, his emotional drives and training. It requires an understanding of the integration of the physical, mental, emotional, and social forces which drive or thwart the individual toward acceptable or unacceptable goals. This understanding requires the pooled experience of the psychiatrist, the psychologist, and the social worker.

Freud writes in the foreword of August Aichhorn's *Wayward Youth*¹ that "if a teacher has learned analysis by experiencing it himself and is capable of applying his knowledge as a supplementary aid in his work with borderline and mixed cases, he should obviously be allowed the practice of analysis and should not be hindered in it for narrow minded reasons." If there is anything scientific to medicine, to psychiatry, to psychology, or to social work, the having had an experience in one of these fields can not of itself qualify that individual in such a specialty. Because a man has had a Stanford-Binet does not qualify him *per se* to give and interpret this measurement; because a man has had a major surgical experience does not qualify him to hang out a shingle as a physician and surgeon; because a man has had an attack of manic depressive psychosis does not make him a full-fledged psychiatrist nor because a man may have experienced a passage across the ocean on the *Normandie* is he prepared to become the boat's navigator. Experience has no doubt had educational value and the experience may bring about a sympathetic understanding, but it can not qualify. If to experience, to understanding, to sympathy, to intuitions is added the training of the physician, of the psychiatrist, of the psychologist, and of the trained

¹ August Aichhorn, *Wayward Youth*. New York: The Viking Press, 1935.

social worker, be she visiting teacher or psychiatric social worker, the success of a child guidance clinic is not guaranteed in each case.

Child guidance clinic techniques require time. The idea that if this or that problem child can be seen only by the psychiatrist, then "presto chango," a readjustment is made, is pure and simple nonsense. Rapport is not established in all cases on such a simple basis. The psychiatric diagnosis may be made at times from the history alone, but the internalization, the reconditioning and the reeducation of the patient requires hours and hours and probably can not be carried out entirely by the psychiatrist but must be carried out through the cooperation of the social worker, with the home, the school, the neighborhood, the social and recreational agencies, and the patient.

The diagnosis to be dynamic must result from a synthesis of the information brought by the social worker, the psychologist, and the psychiatrist. The therapeutic plan to be successful must be based upon the pooled information, facilities, abilities, and opportunities of the total environment as well as that of the patient. The plan may require days, weeks, months or years to work out. Once determined, all planners should know the progress, the failures, the weaknesses, the difficulties, and the hurdles encountered. The carrying out of the plan may in some instances be the specific responsibility of the psychiatrist or the psychologist, but, as a rule, becomes the responsibility of the social worker, yet the joint obligation of the staff.

It is quite futile to attempt a child guidance program without the wholehearted cooperation of those immediately concerned. Diagnosis may be made, plans of treatment may be suggested, but workers struggle in vain unless all concerned are willing to cooperate. Therapeutic failure results not so much from lack of accurate diagnosis, or well laid plans as from the inability to overcome the resistance to therapy by the patient.

A CHILD GUIDANCE CLINIC IN OPERATION

The Child Guidance Clinic in the Long Beach Public Schools is used here as an example of the functioning of such a clinic in a school system. Following a demonstration by the California Department of Juvenile Research the administration of the clinic was placed in the hands of the Director of Research. The clinic was set up on a part time basis, the only full time worker in the clinic being the visiting teacher. The psychologist was drawn on for part time service from the Department of Atypical Children; the medical and psychiatric service was drawn from the Health Service Department. The children were referred to the clinic by the teachers, principals or parents

through an application for service. The application for service was, as a rule, reviewed by the Director and the social worker, and if the patient met the following requirements: (1) normal intelligence or above, (2) a resident of Long Beach, (3) a behavior problem but not a recognized delinquent, and (4) cooperation of parents and school authorities assured, the preliminary social history was then secured. Appointments for physical, psychological, and psychiatric examinations were scheduled. When these were completed the staff met for a case review or study, diagnosis was arrived at, recommendations were made and a planned therapeutic program with definite goals was instituted. The case staff conferences were, as a rule, open to those immediately concerned with the problem. The teacher, principal, attendance supervisor, representatives from various local social agencies concerned, were invited to share the staff conferences.

There are other plans followed in the schools of California but the closer each program is patterned after the original plan of the National Committee for Mental Hygiene the greater will be the effectiveness of the service. Good work is being done in many places despite the fact that personnel is lacking, but such efforts should not be designated as child guidance clinic work.

The following cases illustrate the functioning of a child guidance clinic in the Long Beach City Schools:

CASE I

Refusal to go to school in eight year old girl with superior intelligence, negative physical findings, but with marked suggestibility and emotional instability.

"MM" is an eight year old girl in a family of seven children, six of whom are living. The parents are well adjusted and the home is well furnished, typically conservative and harmonious. "MM" has an I.Q. of 118 on Stanford-Binet test, and at the time of study, was in the 4B grade. Previous school record had been uneventful. She had always been a cheerful, carefree child.

"MM" had an attack of influenza, complicated by a "severe heart condition" soon after the school opened in the fall. Because of this physical condition she did not return to school during the remainder of the year. With "MM's" return to school a set of symptoms developed. These were characterized by refusal to go to school, refusal to stay in the classroom when brought to school, fear of the dark, fear of being alone, fear of dogs, day time soiling of clothing, temper tantrums, and a reversion to infantile level of dependence upon mother.

Physical examination resulted in notation being made, "a well nourished, pleasant girl, who has no marked abnormal physical conditions, but who is very talkative and is given to exaggeration." This examination eliminated the necessity of limiting her physical education activities on the basis of a "severe heart condition."

Psychiatric interview brought out the fact that "MM" was a very sensitive child with a hyperactive imagination, dealing in phantasies which supported her own wishes, fears, and fancies. She was supported in these emotional abnormalities by an over-indulgent, overconscientious mother who insisted that there is, "something at the bot-

tom of all this that we haven't reached yet," and a father who is a "self-made man," who stated with some satisfaction that his father had to take him to school, "on the end of a buggy whip."

Interpretation. Investigation indicated that "MM" could be sent on errands over the same route she took to school without arousing fear of dogs or setting off a tantrum. It also indicated that the mother made it easy for her to return from school; that the mother believed the fantastic tales told by "MM" about the various school situations, and encouraged this type of fabrication. It is, therefore, apparent that "MM," through her recent illness, had regressed to an infantile level, and was getting definite satisfaction out of this baby role.

Treatment. The mother was assured that "MM" had actually recovered from her illness and that no "serious heart condition" existed now, and that "MM's" behavior was of an emotional nature; and that "MM" needed to face her daily responsibilities as any other healthy child should.

The clinic was definitely assured of its position in this matter by the courageous, conscientious action of the principal of the school, who was given all the findings in the case and who acted with authority on an occasion when "MM" refused to remain in her classroom. She screamed, kicked the door, kicked at those restraining her, and cried for her mother. The principal took hold of "MM's" arm firmly, but gently, and said, "You are too big to act this way. We cannot have you disturbing the school." Without a tremor or sob "MM" hung her wraps in the wardrobe, took her seat, and went to work. This ended the tantrums in the classroom. On another occasion "MM" refused to go to school. As instructed, the mother called the principal, the caretaker was sent for her, and when she saw him coming, she ran out of the door and hurried to school. Her behavior, as concerns school attendance, has been normal since then. She entered junior high school this year, and because her adjustment had been so well made the record of this study was not sent along.

It will be noted that the adjustment of "MM" was made through the active cooperation of the mother with the school, after careful examination had ruled out all possibilities of physical causes.

CASE II

Impulsiveness, irritability and lack of emotional control, in nine year old girl who has had *encephalitis lethargica*.

"LL" is the youngest of three children, was of normal delivery, but at the age of six weeks developed *encephalitis lethargica*. The onset of talking and walking was definitely retarded. She has always attended the same school. The family is broken, the mother working in a business office. "LL" has always been assumed by the teachers to be a "spoiled child."

At home, on the street, or in the school "LL's" behavior has been impulsive, apparently without reason or direction; with episodes of emotional instability such as laughing and crying; and, as the mother states, "She acts without thinking." This type of behavior, of course, has led to many embarrassing situations both in school and at home. The teachers believed that "LL" was just a "spoiled child," and the mother assumed a hopeless attitude.

Physical examination does not reveal any abnormality in "LL's" physical condition.

Psychiatric examination reveals that she feels very insecure, that she does not act like other children, and that she has difficulty in playing with other children. She believes the latter is due to the fact that she gets mad so easily. Stanford-Binet gives her an I.Q. of 92.

She has stolen things, only to give them away the next instant. She gives away her playthings and is likely to steal them back again in the course of the next day. She is apparently unable to assume any responsibility, and, both in school and at home, teachers and parents must constantly be picking up after her. Because she does such bizarre things, the school children tell of these exploits to the teachers and she has been dubbed the "queer thing."

Treatment. The examination and history had clearly shown that this child had suffered from an organic disease, that is, *encephalitis lethargica*, and that it is definitely established that those who suffer from this disease have behavior disorders as sequelae. This is on the basis of actual pathology to the basal ganglia, the mid-brain and especially the thalamic area. This particular portion of the brain is thought to control the maintenance of muscle tone, automatic action, and especially the expression of instructive and emotional reaction.

It was, therefore, thought that the mother and teachers both would have to see this child in a new light. Bond and Appel's book on *Behavior Disorders Following Encephalitis*¹ was recommended to them, and special attention was called to the chapter on "Changing Behavior." All those concerned in "LL's" educational and social training took up the task of training with renewed zeal, insight, and purpose. The forms of discipline were definitely planned. There was much more of explanation, praise, and reward, substitution, wholesome neglect, deprivations, isolation, and the use of authority. This particular change of attitude, and purposeful type of discipline on the part of school and home has created a very marked change in "LL's" behavior. This last semester she has made definite progress in adjustment to her school and home situation, only occasionally breaking over the school program.

This case illustrates one in which there is an organic basis for misbehavior which has been definitely influenced for better adjustment and more acceptable behavior through an understanding of the underlying causes. Treatment must be a cooperative enterprise.

CASE III

Organic disease, in boy of seven resulting in inability to adjust to school-room situation.

"TT" is a boy who developed "fits" from "worms" at the age of about nine months. These "fits" have been gradually getting more marked. There have been all kinds of medical and non-medical treatment, but no one plan suggested has been followed for any length of time. The father insists that "TT" be placed in school and asked for the examination to have him placed. He has been tried in kindergarten, in first grade, in private and public schools, with tutor, and at this time the father demands that if he cannot be placed in school, a home teacher be furnished.

"TT's" reactions and behavior have always been the same every time he has been in this office. This is typical of his everyday behavior in the classroom. He is very restless, cannot sit in his chair for any time. He is up and about the office handling the telephone, books, and instruments on the office desk, and the pictures on the wall. His interest can be maintained only for short periods at a time. He is unable to cooperate in the slightest way in carrying out commands. The longer he remains in the office the more meddlesome he becomes. The father repeatedly reprimands him, but this seems to be of no avail.

Diagnosis of grand mal epilepsy with mental deterioration is made and recommendation is made that a home teacher be furnished as every other means has been exhausted; and because his restlessness, irrepressible impulsiveness, meddlesomeness

¹ Earl Bond, and K. E. Appel, *Treatment of Behavior Disorders Following Encephalitis*. New York: Commonwealth Fund, Division of Publications, 1931.

and inability to cooperate make it impossible for him to benefit from the regular classroom procedure.

A home teacher was furnished, and a schedule was made by the home teacher with the parents. After a few weeks the home teacher complained that "TT" and his parents were seldom at home when she called. After giving due warning to the parents, the home teacher service was discontinued.

This case is presented to indicate that although the school provides the best, most up-to-date, and practical type of service some children cannot profit by such service. In this case the cause is primarily in the organic disease suffered by the pupil and the inability of the family to cooperate with the school. When such exhaustive measures have been taken and all have failed, the schools can only resort to one other recommendation, which, in this case, is that of state institutional placement.

CASE IV

Exhibitionism, on the part of a thirteen year old boy in the classroom.

"WSP" was referred for study by his principal; the complaint being that he exposed himself in an indecent manner in the classroom.

Physical examination indicates that "WSP" is thirteen years of age, in 7A grade, in first section, and getting on the average better than B grades. He is one of four children. The oldest is fifteen and the youngest six. There are three boys and one girl. "WSP" is the second child. Examination reveals no physical abnormalities nor defects, but does indicate a precocious sexual development with evidence of sex play, which is admitted as of six to eight months' duration. The home is intact. The father is a mechanic who appears to be an honest, hard working individual who has no concept as to his duty toward his boys so far as sex education is concerned. The mother is a well meaning woman, who is entirely overcome by shame because of the delinquencies perpetrated by her son.

The father was present at the first examination and differed with "WSP" as to the onset of his sex delinquencies. The father stated that he had noticed this precocious sexual development some eighteen months previous to present episodes. He had warned "WSP" that if he got into trouble, "it would just be too damn bad." The father did state that "WSP" had been truant from home, and that he had stolen from the Kress store in this city.

Treatment. Inasmuch as "WSP" had been suspended from his junior high school, it was decided to allow him to continue in a boys' vocational school. This meant transfer to a school in a different section of the city, which necessitated several transfers daily on the buses and other inconveniences. This transfer was taken very gracefully by "WSP" and that semester he remained at the vocational school, achieving a fair scholastic and citizenship record.

The second step in the program was through psychiatric contacts once every two weeks of one hour duration. These contacts lasted about five months. After "WSP" was convinced that the examiner's purpose was not disciplinary, his reserve was slowly overcome. De Schweinitz' *Growing Up*¹ and Meagher's *A Study of Masturbation and Its Reputed Sequelae*² were discussed in as impersonal a way as possible. He soon confided that he had overcome his habit of masturbation and it appeared that he seemed to be relieved of feelings of guilt. He still remained somewhat shy, rather ego-centric, but made, in spite of these personality traits, a worthy adjustment. At the end of the semester the question of transfer back to his junior high school was left to

¹ Karl De Schweinitz, *Growing Up*. New York: The Macmillan Co., 1922.

² John F. W. Meagher, *A Study of Masturbation and Its Reputed Sequelae*. New York: William Wood & Co., 1924.

his own discretion. He was told that the examiner had confidence in his ability to control himself. He chose to return to his former school. He has remained there the whole school year, making a good record both in citizenship and scholarship.

While the problem has been apparently solved it is not the conviction of the clinic or school personnel that this boy is permanently cured; yet the school has stood by this boy during a period of special stress and strain and provided educational means for him to understand certain physiological mysteries.

CASE V

A change of schools produces a regular epidemic of delinquencies, in a boy of ten who previously had been fairly well adjusted.

"RDS" is ten years old. He has an older sister who is eleven years of age. "RDS's" father deserted the family in Texas some four years ago. The maternal grandparents and "RDS's" mother and sister moved to California, the children remaining with the maternal grandparents while the mother sought employment in a distant city. While with the grandparents, "RDS" and his sister were thought to be, and treated as, white children. The mother generally was received as a white woman, but was actually of colored blood.

The mother secured work and through this came to know and admire a man whom she married. This man was a negro. The foster-father agreed to have the step-children moved to their home, but it was thought that it would be easier to adjust to one child at a time, so "RDS" was chosen. "RDS" entered school but immediately became a problem. He tells fantastic stories, and accuses other boys in school of calling him "nigger." He gets into fights over the same cause, he steals, plays truant, lies in his conversation, is defensive, incoherent, and irrelevant.

Physical examination reveals a rather alert boy who becomes more and more circumstantial as we reach his personal problems. He does not present any physical characteristics that suggest negroid blood and has only such minor physical defects as dental caries and acute conjunctivitis which can be easily remedied.

Psychiatric examination reveals that he is not willing to be frank, that he talks only about himself, his grandparents, his sister, mother, and foster-father in irrelevant terms and appears to be definitely blocking the efforts of the examiner. When the subject is switched to the other boys in the school who call him "nigger" he is voluble in accusation and in description and circumstances. When these affairs are investigated it is soon realized that the "nigger" episodes are pure fabrication. There have always been many negro boys in that school. "RDS" denies hearing voices and will not be frank with the examiner when he talks to him regarding his foster-father. Before there could be another psychiatric contact there was another episode of stealing. This time the juvenile authorities demanded that he be returned to his grandparents.

It is the idea of the examiner that this boy is projecting his own emotional reaction toward his foster-father upon the boys of his school and neighborhood; that his flight into delinquencies is a purposeful effort on his part to rid himself of an intolerable situation. The recommendation of the clinic workers would have been that he be returned to his grandparents had not the juvenile authorities anticipated this action.

CASE VI

An episode of stealing, high finance and lying, in a boy of junior high school age, with superior intelligence.

"WBW" and his sister came to California two years ago with their foster-father and foster-mother. The foster-father is the children's paternal uncle. Two other sisters of "WBW" remained in the east with the grandparents. The mother died some

five years ago, and the father passed away in a state institution for the insane some two years ago. "WBW" and his sister call their foster-parents "Mother" and "Daddy" respectively. The foster-parents have no children of their own. The foster-father would not come to the office for an interview, although special appointments were made. The foster-mother, considerably more cooperative, came several times. The problem as presented by the foster-parents is entirely different from that presented by the visiting teacher. The foster-parents are most concerned about the possibility of the probable inheritance of the mental disorder of the father by "WBW" and his sister. The foster-mother states that her husband continually refers to this, or that the personality characteristics of these children are typical of the personality traits of their father, and that which contributed to his mental breakdown.

"WBW" is 12 years of age, and in the seven A grade. He is the only boy in a family of four children, the oldest of whom is fifteen and the youngest seven. He is a healthy, alert, responsive boy who has many winning ways. He has no physical abnormalities.

Psychiatric examination does not indicate any psychopathic trend or mental abnormality. On the contrary, we have a boy with keen intellect, with insight, a sense of real-values, but with a marked feeling of insecurity. This insecurity is based upon the loss of his parents, separation of the members of the family, and the attitude and ideas of his foster-parents, that his personality is like that of his father's and, therefore, he is doomed. He has heard his foster-parents talk about the possibility of their mistake in taking these children and that it would probably be better if they were placed in some orphanage or at Mooseheart near Chicago. He repeatedly states that "he does not eavesdrop" but does hear the foster-parents talk about the cost of the children, the possibility of insanity, and the advantage of sending them both back to an orphanage.

He is perfectly frank when we discuss his recent episodes of delinquencies. These are all within reason and, as explained by him, served as a means to an end of earning more money and thus paying back the money used to gain his end—a bicycle. He takes his punishment in a very matter-of-fact way and as the result of his behavior. He has insight enough to profit by his experience.

This case is given to illustrate the effort of a boy of high intelligence to achieve security even though he must use antisocial methods. It also indicates that parents or foster-parents may be the cause of the insecurity in an individual, through the projection upon that individual of their own fears, ideas, and misconceived notions.

Through the visiting teacher and the school clinic these foster-parents were given a new interpretation of the situation. A new program was planned for "WBW" for a year, and all has gone well.

SUMMARY

An effective child guidance clinic must have (1) an adequate personnel, consisting of a social worker, a psychologist, and a psychiatrist; (2) it must have time; this service cannot function effectively in an overcrowded program; (3) it must have the active whole-hearted cooperation of the school administration, the supervisory and teaching staff, the recreational, character building social agencies of the community and that of the parents and patient.

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